



Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.
SECTOR 10—CHART INFORMATION

SECTOR 10

THE AFRICAN COAST—RAS SIYAN TO RAAS XAAFUUN

Plan.—This sector describes the African coast from Ras Siyan, on the W side of Ras Bab al Mandeb, to Raas Khansiir, on the Gulf of Aden. The coast then continues E to Gwardafuy (Raas Casey), then S to Raas Xaafuun.

Both Golfe de Tadjoura and Port de Djibouti, the principle port of Djibouti, are described along this section of coast. The islands E of Gwardafuy are then described.

The descriptive sequence is generally from W to E.

General Remarks

10.1 Winds—Weather.—Winds in the Gulf of Aden, throughout the year are governed by the monsoon of the Arabian Sea and the Indian Ocean. During the Northeast Monsoon (October to May), these winds assume an E or ENE direction in the Gulf of Aden and following the gulf, blow in a NW direction through Bab el Mandeb into the Red Sea.

From June to September, steady SW winds prevail, blowing strongly at times out of the Red Sea, through the Gulf of Aden, E to Suqutra, and into the Southwest Monsoon in the Arabian Sea.

Toward the middle of June to August, between Bab el Mandeb and Mait Island, there are strong W or SW winds.

Near the coast of Africa at this season, there are occasional violent SSW land squalls. They generally occur between midnight and daybreak, lasting about 1 hour.

In September, W winds cease and land and sea breezes prevail and continue through October. The nights are calm and sultry.

At Berbera, on the S shore of the Gulf of Aden, 65 percent of the observations show a SW wind in July, while in the winter months, NE observations show a prevalence of from 50 to 57 percent.

Tides—Currents.—Surface current speed and direction in this area are mainly influenced by the Northeast Monsoon and the Southwest Monsoon.

Variation in speed, direction, and the duration of the surface flow can be expected in the Red Sea because of its enclosed nature, narrowness, and irregular shoreline. Strong eddies and countercurrents may occur near its shores, islands, and reefs.

During both monsoons, the current speed generally ranges from 0.2 to 0.7 knot, depending upon the strength of the wind.

Strong currents, up to 2.5 knots, often have been observed in the vicinity of Bab el Mandeb. In the Gulf of Aden, from October to April, the currents set SW at speeds ranging from 0.2 to 1 knot. During June to August, the currents set ENE at speeds of about 1 knot near the middle of the Gulf and up to 2 knots close to the Arabian coast.

Maximum speeds of about 3 knots have been observed along the coast in July and August.

During October, the currents in the Arabian Sea become weaker and begin to set SW into the Gulf of Aden. East of Suqutra, there is an unusual but clearly evident NE flow during

December, which occurs between the prevailing W sets during November and January. The duration of this phenomenon, which probably occurs every December, has not been fully determined.

In February, the persistent W current begins to change. The current divides at about 17° N, 55° E, and both branches follow the coast, with speeds ranging from 0.3 to 0.8 knot. Changes in the current patterns continue through August and the early part of September, when the recurring seasonal cycle begins again in the Gulf of Aden.

Aspect.—The flat, gently sloping coast of Djibouti (Jibuti), the former French Territory of Afars and Issas, formerly known as French Somaliland, is backed by sandy plains which extend up to 30 miles inland. Rugged hills and a dissected plateau with isolated mountain peaks back this coastal plain.

Golfe de Tadjoura is flanked and backed by rugged, partly wooded hills and a mountainous plateau.

The coast in its N and NE parts consists of a series of generally, narrow plains, separated by hilly to mountainous spurs and ridges, which extend to the sea from the rugged hills and mountains in the interior.

The plains on the N and NE coasts are intersected by many streams. Suqutra and the islands E of Gwardafuy are generally hilly and mountainous, with only a few areas of coastal plains.

Steep cliffs, which rise directly from the sea, border the shores of these islands.

Caution.—Numerous oil and gas exploration rigs, with associated pipelines and structures, may be encountered in the waters described in this sector.

Ras Siyan to Ras Khanzira

10.2 Ras Siyan (Ras Siyyan) (12° 29'N., 43° 19'E.), on the SW side of Ras Bab al Mandeb, is the E extremity of a promontory joined to the coast by a narrow neck of land. The N side of this promontory is rocky and steep, and rises to a reddish, volcanic peak, 138m high. A mangrove-bordered bay, which is almost all dry, stands on the W side of this promontory. The remarkable white Rocher Siyan lies in this bay. The coastal bank, with depths of less than 9.1m, extends about 1 mile SE from Ras Siyan.

During S winds, anchorage can be taken N of Ras Siyan, in depths of 14.6 to 18.3m, sand. Little shelter is provided and the currents are strong.

Jezair Seba (12° 28'N., 43° 25'E.) consists of six rocky, steep islets, which lie from 2.5 to 7.5 miles E of Ras Siyan. All of these islets lie on breaking reefs and are of a brownish color, with the exception of Ile Grande (Kadda Dabali), the NE islet, which is yellow. This latter islet has a conspicuous peak, 114m high. A masonry block stands on the island's summit; a beacon stands on the island's N end.

Ile de l'Est (Horod le Rhale) (12° 27'N., 43° 26'E.), 83m high, and Ile de Sud (Rhounda Komaytou), 47m high, stand 0.5 mile and 1.5 miles SE, of Ile Grande.

Ile Basse (Ile Tolka) (12° 28'N., 43° 25'E.), 17m high, stands 1 mile WSW of Ile Grande.

Ile de l'Ouest (West Islet) (12° 28'N., 43° 22'E.), about 3 miles ESE of Ras Siyan, is 62m high. A shoal, with depths of less than 10m, extends about 0.5 mile WSW from the islet; a narrow shoal with similar depths extends 1.5 miles S from the same islet.

Ile Double (Double Islet) (12° 28'N., 43° 23'E.), 46m high, stands 1 mile E of Ile de l'Ouest. A sunken rock, with a depth of about 0.4m, lies about 0.5 mile NW of Ile Double. A 19.2m patch lies about 2 miles N of the same islet.

Depths of less than 20.1m and 5.9m exist about 1 mile NW and 0.5 mile WNW of Ile Double. Eddies have been seen in areas that were clear of shoals. A 31m bank lies about 3 miles E of Ile de Sud, outside the 200m curve.

Jezair Seba has been reported to be a good radar target at distances up to 27 miles.

Massif de la Table (Jebel-Jan) (12° 15'N., 43° 23'E.) is the highest of some ranges of tableland which closely approach the coast. It stands about 13 miles S of Ras Siyan and is marked by a beacon on its S side. Close S of Massif de la Table are the Collines de Godoria (Jebel Jan) and about 9 miles WNW stands Kabalto, a steep peak 340m high.

A beacon stands on the S end of Plateaux de Goeuh at an elevation of 471m, about 9 miles W of Collines de Godoria.

An extensive plain extending to Golfe de Tadjoura stands S of these tablelands. On the N side of Golfe de Tadjoura, Monts Mbla extends N and attains a height of 1,202m in **Sono Ali** (11° 57'N., 42° 59'E.).

Other prominent peaks of this range are Morne Rouge, with three reddish peaks, 131m high, about 14 miles ENE of Sono Ali; Accolade (Mouriya), trident-shaped and heavily wooded, 366m high, about 3 miles NW of Morne Rouge; Chaise du Diable, 433m high, about 5 miles SW of Accolade; and Pic du Hussard (Aramuda), with a broad summit, 802m high, about 5 miles W of Accolade.

10.3 Djebel Gouda (11° 45'N., 42° 40'E.), about 1,700m high, is the summit of a mountain range of tableland on the NW side of Golfe de Tadjoura. Pic Deloncle and Pic Lagarde, 1,664m high, at the E end of this tableland, are thickly wooded. Morne Noir, about 4 miles N of Pic Deloncle, and Les Trois Rois, about the same distance SSW of Pic Lagarde, are prominent marks.

Both of these latter peaks are thickly wooded. Southeast of Golfe de Tadjoura, the low coast gradually rises toward the mountains about 20 miles inland, but approach the coast about 47 miles W of **Berbera** (10° 26'N., 45° 01'E.).

The recession in the mountains at Berbera forms so deep a curve it gives the impression of a bay of considerable size when viewed from seaward. The coast between Berbera and Ras Khanzira is low, but there are many hills at moderate distances inland.

Dubriat, about 9 miles SE of Berbera, is 802m high; Biyo Gora, about 5 miles ENE of Dubriat, is 950m high. Aklo Hill, 384m, high, about 15 miles NE of Biyo Gora, is the E of two sharp conical peaks. Black Peak, 315m high, about 13 miles E of Aklo Hill, is conspicuous and surrounded by sand. Kumbedda, about 4 miles NNW of Black Peak, is 72m high. It appears as a conspicuous white patch when the sun shines.

The 200m curve between Ras Siyan and Ras Bir, the N entrance of Golfe de Tadjoura, lies from 9 to 10 miles offshore, gradually closing the coast in the vicinity of Ras Bir.

The gulf and its main entrance between Ras Bir and Iles Musha are deep, but have not been closely examined.

The S side of Golfe de Tadjoura, and the coast S of it, is fronted by a bank which extends up to 16 miles offshore and which shoals rapidly. Few soundings have been obtained N and E of the bank, but several dangers, including Iles Musha, are located on it. Outside of the charted dangers, the bank has general depths of 22 to 37m.

The outer edge of this bank is for the most part a narrow ridge, with depths of 22 to 36m lying 13 to 16 miles offshore; few soundings have been recorded seaward of this ridge.

Banc Arabe (Arab Shoal) (11° 40'N., 43° 40'E.), with depths of 6 to 18m, sand and coral, is not clearly visible. Depths increase rapidly to the 200m curve. During 2 days in February, with light N and NE winds, a current sets SE on Banc Arabe at a rate of 1 to 1.5 knots.

Khor Angar (Anghar) (12° 23'N., 43° 21'E.), a shallow inlet, stands 6.5 miles SSE of Ras Siyan. A prominent gray, cubical, masonry guardhouse stands on the NE side of the entrance of this creek. From **Collines de Godoria** (12° 14'N., 43° 23'E.) to the S, the coast continues low and sandy but about 5 miles NNE of Ras Bir it begins to rise. The reef bordering this section of coast extends up to 1 mile offshore.

Open anchorage can be taken off this coast between Massif de La Table and Collines de Godoria.

Ras Bir (11° 59'N., 43° 22'E.) rises to a height of 30m and is cliffy. The lighthouse on this point has been reported to be a good radar target at distances up to 22 miles.

It has been reported that the contour of the coast N of Ras Bir is clearly visible on radar at distances up to 28 miles.

Caution.—Surveys are incomplete along the coast S of Banc Arabe, with less water reported in places. Vessels should use extreme caution when approaching this coast.

The N part of the coast between Ras Siyan and Ras Bir, the N entrance point of Golfe de Tadjoura, is low, sandy, and bordered by a reef extending up to 1 mile offshore.

Golfe de Tadjoura

10.4 Golfe de Tadjoura (11° 43'N., 43° 12'E.) is entered between Ras Bir and Plateau de Heron about 25 miles SSW. Gohubbet Kharab, a basin almost landlocked, is entered through a narrow channel which stands at the head of the gulf. Iles Musha, together with some other islets and areas of foul ground, lie on the S side of the gulf NE of Plateau de Heron.

The gulf shores, except for a few low places, are generally high and backed by mountains rising only a short distance inland. The shores are barren but the mountainous country is fertile. The anchorage areas available are scarce and do not provide much shelter or security.

Iles Musha (11° 44'N., 43° 12'E.) rise to a height of about 12m. The coral banks surrounding these islands, within the 20m curve, dry in places and extend about 3 miles E and 1.5 miles N and S from the group.

Ile Musha, the largest and easternmost island, appears as a dark bank and is the most conspicuous. This island is also

radar-conspicuous. A light is shown from a metal framework tower, 17m high, standing on the NE end of this island.

Ile Maskali (11° 43'N., 43° 09'E.), the W island of the group, lies 1 mile SW of Ile Musha. A light is shown from a metal tower, 20m high, standing on the W end of this island. At times, this light is obscured by sandstorms.

Banc du Dankali (11° 43'N., 43° 20'E.), with a least depth of 5.8m, lies about 6 miles E of Ile Musha. Banc de l'Antares, with a least depth of 12.8m, lies about 5 miles ESE of the same island.

Banc Somali (11° 38'N., 43° 21'E.), with a least depth of 11m, and Banc du Levant, with a least depth of 11.9m, lie about 10 and 12 miles ESE respectively of Ile Musha.

Banc de la Curieuse (11° 39'N., 43° 11'E.), with a least depth of 14.9m, lies about 4 miles S of Ile Musha and Banc Maskali, with a least depth of 1.8m, lies centered about 1 mile S of the W end of Ile Maskali.

Sheltered anchorage can be taken by vessels with local knowledge, in depths of 11 to 16.6m, sand, in a gap in the reef about 0.5 mile N of the W end of Ile Musha, with the lighthouse on that island bearing 140°.

A good lookout should be posted because several detached rocky patches lie on both sides of the entrance. During the Northeast Monsoon good anchorage can be taken N of Ile Maskali, in a depth of 29.3m, sand, with the NW extremity of Ile Maskali bearing about 213°.

Caution.—Most of the surrounding coral reefs in the vicinity of Iles Musha are enclosed by a nature reserve area. Fishing, the taking of coral, and collecting shells within this area are prohibited. In addition, all marine and submarine activities in the area are prohibited.

10.5 Obock (Hayyou) (11° 58'N., 43° 18'E.) indents the coast between a point about 2 miles W of Ras Bir and Cap Obock, about 3 miles farther WSW. Coral banks extending up to 1.5 miles offshore divide this port into Port du Nord-Est and Port du Sud.

The village of Obock stands on the W shore, close N of Cap Obock. Obock, once the capital of the former French Territory of Afar and Issas, is now only a small village and has little commercial value to shipping, except as an anchorage.

Depths—Limitations.—A jetty for shallow draft vessels extends about 0.2 mile from the coast about 0.5 mile NE of Cap Obock. A disused pier extends from the coast about 0.5 mile farther NE.

Banc du Curieux, with depths of 5.5m and less, extends up to 0.5 mile SW from the NE shore of the bay. Banc du Surcouf, with similar depths, extends about 2 miles ENE from a position about 1 mile E of Cap Obock. A drying reef lies on the W end of this bank. Shoal water was reported to extend S from this bank.

Banc du la Clocheterie, separated from Banc du Surcouf by Passe du Sud, extends about 0.5 mile E from Cap Obock. Parts of this bank dry and have some large boulders on it.

Two small islets lie E of Obock Village, on the drying coastal bank which fringes the W shore of the bay. A drying rock lies close SSW of the S islet of the two.

Banc du Bisson, a continuation of the coastal bank between the two inner parts, extends up to 0.5 mile offshore. Its outer part usually dries at LW springs.

Banc des Perles, with a least depth of 4.6m, and Banc du Milieu, with a least depth of 3m, occupy the greater part of the passage between the two ports.

Several shoal patches lie between these two banks and NW of Banc du Milieu.

Aspect.—With the exception of the residency, a large, square building close W of Cap Obock, all of the buildings are in ruins. A flagstaff on a tower close N of the residency is a good mark. A ruined penitentiary and factory stand about 2 miles NNW of Cap Obock.

Two lighted beacons, in range 337.75°, stand 1.5 miles and 0.5 miles N of Obock. This range leads through Passe du Sud into Port du Sud. These lights are extinguished from October to April.

Anchorage.—Anchorage can be taken, in depths of 10 to 32m, mud, with good holding ground, in Port du Sud, sheltered from all except S winds. The S wind sometimes blows strongly, rendering this anchorage dangerous. Several anchors and cables foul this anchorage, so care should be taken when anchoring here.

Anchorage can also be taken on the entrance range, in a depth of 27.4m, or in a depth of 18.3m, about 0.5 mile E of the flagstaff on Cap Obock. In foul weather, anchorage can be taken, in a depth of 9.1 to 14.6m, in Port du Nord-Est.

Anchorage, sheltered from N winds, can be taken, in a depth of 20.1m, good holding ground, about 3 miles W of Cap Obock, with the E side of Vallee de Latela bearing 310°, distant 1 mile.

Directions.—If approaching from the NE, steer to pass S of Banc du Surcouf and the shoal water reported S of it. When Cap Obock bears 290°, steer toward it until S of Passe du Sud, then enter the port on the alignment of the lighted range beacons. If proceeding to Port du Nord-Est from Port du Sud, pass through the straight but narrow channel, in depths of 12.8 to 23.8m. This channel should be navigated with a lookout aloft with the sun in a favorable position, or the pass should be buoyed beforehand.

10.6 The coast between Cap Obock and Vallee de Latela, about 4 miles to the W, is fronted by a cliff, 19 to 26m high, broken in places by ravines. Pointe Oursin is low and extends about 0.4 mile offshore at the entrance to this valley. A shoal bank of sand and mud extends up to 1 mile offshore from the point.

The coast between Pointe Oursin and Ras Duan, about 14 miles SW, is bordered by steep cliffs and fringed by shoals and reefs, which extend from 0.5 to 1 mile offshore.

Ras Duan (11° 49'N., 43° 03'E.), a steep cliff rising to a height of 122m, is backed by higher land extending to the mountains in the interior. The coast between Ras Duan and the entrance of Ghoubbet Kharab, about 27 miles to the SW, is low and sandy. A wooded plain, which ends at the base of the cliffs at the entrance of Ghoubbet Kharab, extends inland to the mountains in the interior.

Between Ras Duan and Ras Ali, about 7 miles WSW, the coast is indented by a slight bight, with its W half fringed by a coral reef which extends about 0.5 mile offshore.

Depths of 9.1 to 29.3m exist off the outer edge of this reef. Mersa Duan, a break in the coastal reef about 2 miles NE of

Ras Ali, provides anchorage for small craft with local knowledge during the Southwest Monsoon.

Anchorage is not recommended during the Northeast Monsoon or when E winds prevail.

Anse Reissale (11° 46'N., 42° 56'E.) is entered close W of Ras Ali, between two cliffs, and has a beach on its E side.

Small craft can shelter in this narrow inlet, in depths of 11 to 12.8m, mud, but there is a 2.7m bar across the entrance.

Between Anse Reissale and Tadjoura, the coast is rocky and steep for about 3 miles and then becomes low and sandy.

Tadjoura (11° 47'N., 42° 57'E.), a small village which stands on the NE side of a bay about 1 mile wide, is the residence of the Sultan of Danakil.

The Great Mosque, the NW mosque of three, stands about 90m inland and is a good mark. The tower of the residency stands about 183m NE of the Great Mosque.

An L-shaped jetty extends S and SE from the shore at the W end of the village.

Two lighted beacons, in range 003°, lead to the jetty. The bay is fringed by a reef about 137 to 274m wide, which extends about 0.5 mile S from the head of the bay.

A drying rock stands on the SE edge of this bank, about 0.5 mile SW of the Great Mosque. A detached 5.8m patch lies about 0.5 mile SSW of the same mosque.

A rock, visible at HW, stands close off the W entrance point of this bay; a shoal, with a least depth of 2.4m, lies about 0.2 mile ESE of the same point.

Anchorage.—The holding ground off Tadjoura is good but steep-to, requiring a vessel to anchor close inshore. During the Southwest Monsoon, sudden violent squalls make the anchorage untenable.

To approach this anchorage, the W entrance point of Anse Reissale must be kept open S of the sandy E entrance point of this bay. Vessels should anchor with the tower of the residency in range 020° with the S mosque and the lighted beacons in range 003°.

Small vessels with local knowledge can anchor off the head of the jetty. With E winds, vessels with a length of not more than 115m can anchor on the 020° range, in a depth of about 40m.

A mooring buoy for small craft lies about 150m from the front range light on the jetty. A second mooring buoy is laid 0.2 mile SSW of the head of the jetty.

The coast between Tadjoura and the entrance of Ghoubbet Kharab, about 18 miles SW, is bold and exposed to E winds. Ambabbo, a small village about 4 miles WSW of Tadjoura, can be identified by a group of palm trees.

In fine weather or with offshore winds, fairly good anchorage can be taken about 0.2 mile offshore, in depths of about 25 to 40m, sand and mud, with Ambabbo bearing about 335°. Farther offshore, the depths increase rapidly.

Fort de Sagallou (11° 40'N., 42° 44'E.), in ruins, stands 1 mile SW of Pointe des Palmieres and is marked by a group of palm trees.

The coast from the entrance of Ghoubbet Kharab is fringed by shoals up to 4.5 miles NNE.

Ghoubbet Kharab

10.7 Ghoubbet Kharab (11° 33'N., 42° 41'E.), which stands at the head of Golfe de Tadjoura, is landlocked except for its narrow entrance. This deep basin is irregular in shape and almost surrounded by steep cliffs. The N side is bordered by steep cliffs, 120 to 610m high, whereas the S side consists of a vertical wall, which is highest near its E end.

Anchorage can only be taken in a few places because of the great depths in its central part and close off its shores. On the S side of Ghoubbet Kharab, where the winds are usually stronger than in other parts of the gulf to the E, the high cliffs deflect NE winds to E or SE winds.

The entrance of this basin is divided into two passages by **Ile Bab** (Abou Maya) (11° 33'N., 42° 41'E.). A depth of 11.9m has been reported to lie in the approach to this basin, about 1 mile ENE of this islet. This islet is surrounded by a shoal on all except its N side which is steep-to.

This shoal extends SE to the S entrance of Ghoubbet Kharab. Petite Passe, the N passage, is less than 183m wide, with depths of 23.8m to over 40m. Some ruins stand close N of the entrance.

Grande Passe, the S passage, has a width of about 0.5 mile and a least depth of 1.8m. This passage can only be used at slack water because with any wind and tidal current, a large wave is created in the middle of the passage, making it dangerous for small boats.

Tides—Currents.—The tidal currents set through these passages with great rapidity, raising eddies and ripples. A rate of 7 knots is experienced in Petite Passe.

Directions.—Petite Passe, the preferred passage, is not impracticable by day for vessels with a speed of 10 knots or greater except under very unusual conditions.

Entry can be made when the eddies have ceased and the water is smooth, which usually only lasts 5 to 10 minutes. No difficulty should be encountered when entering on the flood.

Although several eddies may form in the passage when the current is strong, they do not affect the steering.

Entering is more difficult during the ebb, especially when it is strong and the wind fresh and ahead. When the ebb is running, the sea in the approach to the passage is rough and covered with foam, which resembles breakers. Leaving Ghoubbet Kharab is always easier.

10.8 Baie de l'Etoile (11° 34'N., 42° 39'E.), entered about 2 miles W of the N entrance point of Ghoubbet Kharab, consists of a sandy bay bordered by a narrow reef. Vessels of any size can be accommodated in its inner reaches, in depths of 20 to 29m, mud and sand.

A shoal, with depths of less than 5.5m, extends a short distance SE from Pointe de l'Etoile, the W entrance point; another shoal, with depths of less than 9.1m, extends up to 91m S from an islet lying close W of the E entrance point. An 8.5m patch lies about 0.2 mile W of the N end of this islet.

Three drying reefs lie up to 0.5 mile NW of the N end of this islet and within the coastal bank, which extends about 0.5 mile offshore. To enter the inlet, pass not less than 0.1 mile S of either Pointe de l'Etoile or the islet mentioned above.

Enter the inlet, keeping toward the SW shore, until about 0.3 mile inside the entrance, then steer a mid-channel course and anchor, as convenient, in the inner part of the inlet.

10.9 Baie Blondeau (11° 34'N., 42° 36'E.), an open bay which provides anchorage to small native craft, is entered between a point about 1 mile W of Pointe de l'Etoile and Pointe de Direction, about 3 miles farther W.

The NW shore of the bay is bordered by shoals extending up to 0.5 mile offshore.

A rocky islet stands on a shoal about 1 mile E of Pointe de Direction and 0.5 mile offshore. The bay should be entered by passing E of this islet.

Baie du Lac Sale (11° 34'N., 42° 33'E.) is entered between Pointe de Direction and a point, surmounted by a crater, about 3 miles WSW. The NE shore of the bay changes gradually from sand dunes to steep cliffs and rises gradually to Bonnet Turc, 246m high, about 1 mile NW of the head of the bay.

A narrow rocky peninsula extends about 0.5 mile ESE from the N shore of the bay near its head. An island lies close S and almost parallel to this peninsula, but no passage exists between the two. The SW shore of the bay is low and broken. A bight at the head of Baie du Lac Sale, entered between the above island and a promontory about 0.5 mile S, provides good anchorage.

The inner part of the bight is very shallow; shoals with depths of less than 5.5m extend up to 0.15 mile from the S side of the bight. A basin, with depths of 11 to 27m, stands on the W side of the bight, but the entrance is closed by a ridge of rocks.

Good anchorage can be taken about 0.5 mile off the S shore of the bight, in a depth of 12.8m, sand and mud. A choppy sea makes up with E winds. The S side of Ghubbet Kharab is composed of cliffs gradually rising from W to E.

These cliffs are broken by a valley about 5 miles S of Pointe de Direction. Ile Parrot, low and rocky, stands at the mouth of a cove about 0.5 mile W of this valley. On the W side of Ghubbet Kharab, S of the SW entrance of Baie du Lac Sale, the coast first forms a narrow inlet about 0.5 mile long, with a rocky islet in its central part. The inlet is about 0.2 mile wide, with depths of 11 to 22m.

Limited anchorage can be taken when sheltered from SW winds. Only small vessels with local knowledge can use this anchorage in an emergency.

10.10 Petite Ile du Diable (11° 32'N., 42° 32'E.), 80m high, lies close SE of the SW entrance point of the above inlet. The lava on the coasts of this island is clearly visible. A coral shoal extends about 137m S and 0.15 mile W from the islet.

Guinni Koma (Grande Ile du Diable) (11° 32'N., 42° 32'E.), 166m high and about 0.1 mile SE of the above islet, is steep and of a yellowish-red color. The passage between these two islets has general depths of 14.6 to 22m, but an 8.5m patch lies in mid-channel. This patch can be avoided by passing close to Guinni Koma. The coral shoal extending from the smaller islet is visible at all stages of the tide and is easily avoided.

Anchorage can be taken, in a depth of 29m, about 0.1 mile W of the middle of the W side of Guinni Koma. The space is limited by the extending reefs and the great depths close W of the anchorage. This anchorage is sheltered, but violent squalls occasionally come down from Guinni Koma.

Mouillage des Boutres (11° 33'N., 42° 42'E.) is entered between the cliffs S of the entrance of Ghubbet Kharab and the narrow, rocky Ile des Boutres standing on the coastal reef about 1 mile to the E. There are general depths of 22 to 36.6m in this bight.

An 8m patch lies close NW of the N end of Ilot des Boutres; a detached 11.9m patch lies about 0.5 mile NW of the same islet.

Anchorage can be taken, in depths of about 27 to 31m, sand, about 0.5 mile W of the N end of Ile des Boutres but it is exposed to NE winds. The coast between Mouillage des Boutres and Pointe Noire, about 23 miles to the E, is bordered by steep cliffs 120 to 150m high.

Between **Ras Korali** (11° 35'N., 42° 48'E.), about 7 miles ENE of Ile des Boutres, and Daba Libah, about 3 miles farther E, the coast is broken by the mountain spurs which closely approach the shore.

Anchorage, sheltered from NE winds, can be taken in the bight close W of Daba Libah.

Daba Libah (Ras Eiro) (11° 36'N., 42° 51'E.), narrow, bushy and moderately high, is a good landmark. This projection extends about 0.5 mile from the coast and is bordered on its E side by a shallow shoal. A rock, about 2m high, stands close offshore about 3 miles ESE of Daba Libah.

10.11 Anse Ambadu (11° 36'N., 43° 01'E.), about 10 miles E of Daba Libah, extends about 0.5 mile inland between two high, dark cliffs and dries at the lowest tides.

Oreilles d'Ane, 544m high, about 9 miles SSW of Anse Ambadu, is a good mark but the lack of good marks in the vicinity of Anse Ambadu makes the approach to the anchorage off the bay difficult.

Good anchorage can be taken, in depths of 22 to 25m, sand and mud, about 0.5 mile WNW of the E entrance point of the bay. Care should be taken to avoid the reefs and shoals nearby.

This anchorage provides good shelter during both monsoons. When strong NE winds blow during the day, vessels swing to the light land breeze at night and roll heavily.

Pointe Noire (Mangadafa) (11° 36'N., 43° 04'E.), about 4 miles E of Anse Ambadu, is low and marked by two small brown hills. To the W of this point, the coast is bordered by a gradually narrowing sandbank with patches of less than 3.7m.

A mud flat and foul rocky ground border the coast on the E side of the point.

10.12 Recif du Meteoire (11° 39'N., 43° 06'E.), with a least depth of 0.9m, lies on the W side of the N approach to the roadstead off Port de Djibouti.

Banc du Pingouin (11° 38'N., 43° 07'E.), with a depth of 2.1m, lies about 4 miles NW of Recif du Meteoire. These two shoals lie on a bank with depths of about 12 to 18m. A 10m patch and a 6.4m patch lie on the W end of this 18m bank, about 1 mile and 1.5 miles WNW, respectively, of Banc du Pingouin.

Banc du El Hadj (11° 38'N., 43° 04'E.) consists of two patches, with least depths of 5.8 and 6.8m, which lie about 5 miles NW of Port de Djibouti. The bank on which these shoals lie has depths of about 12 to 18m.

Banc de l'Etoile (11° 38'N., 43° 05'E.), with a least depth of 2.3m, lies about 4 miles NW of Port de Djibouti, on the W end of another bank with depths of about 12 to 18m. There are several detached shoals with depths of about 12 to 18m, lying between Banc du Pingouin and Banc de l'Etoile.

Caution.—Less water than charted has been reported (1993) to exist in the area of the above four banks and also between Recif du Meteore and Banc Maskali. Mariners are advised to proceed with caution in this area.

Recif Ambouli (11° 37'N., 43° 07'E.), which dries, lies on the W side of the roadstead, about 2 miles NW of Port de Djibouti. Several detached patches with depths of 4.9 and 9.8m, lie close N of this reef.

Banc des Salines (11° 36'N., 43° 07'E.), which dries, lies about 0.5 mile S of Recif Ambouli and parallel to it.

There are several detached patches, some of which dry, lying within 0.5 mile E of the E end of this bank.

The channel between Recif Ambouli and Banc des Salines has general depths of 12.8 to 16.5m, but several isolated patches, with depths of 3.7 to 5.8m, lie in it.

Port de Djibouti (11°36'N., 43°08'E.)

World Port Index No. 47850

10.13 Port de Djibouti, the principal roadstead of Djibouti, the former French Territory of Afars and Issas, stands on the SE side of Golfe de Tadjoura. The port, as well as the whole area of Djibouti, is duty-free, with no customs system. Only goods destined for local use are subject to a tax.

Ample, modern, alongside berthing facilities are provided for cargo vessels. The port operates on a 24-hour basis and is a first port of entry.

Winds—Weather.—From the middle of September to the beginning of May, E winds prevail. A land breeze from the S or SW commences at sunrise, shifting around to an E wind in the middle of the morning, becoming stronger in the afternoon, and progressively dropping during the night. Very good visibility generally prevails during this period.

The Khamsin, a local strong, dry, and dusty wind, which normally commences in the latter part of May, but may not start before the middle of June, generally is experienced about 50 times during the summer.

The Khamsin may occur at any time up to the end of August, but usually will not blow during the afternoon when a sea breeze prevails. When the Khamsin is in full force, the berthing of vessels may be suspended because of the heavy swells in the roadstead.

Tides—Currents.—The mean tidal rise here is 1.1m, while the diurnal rise is 1.6m. Tidal currents in the roadstead are scarcely perceptible; they usually set to the E during the ebb and W during the flood.

Depths—Limitations.—In the N approach to the port, W of Iles Musha, there are general depths of 18 to 36m.

The port consists of a main basin bound on the NE by Jette du Marabout, on the NW by Jetee du Large, which together form the SW extremity of Mole Nord. Mole de Fontainebleau is situated at the SW side and Mole Sud bounds the SE side.

Government Jetty extends 0.6 mile NW, its head is situated 0.1 mile S of the W end of Mole Sud. It can accommodate small craft alongside at the head.

Berth No. 1 and Berth No. 2 lie on the S side of Mole Sud and form a container terminal. They have a combined length of 400m, with depths of 9 to 11m alongside.

Berth No. 3, Berth No. 4, and Berth No. 5 lie on the S side of Mole Nord and have a combined length of about 450m. They have depths of 2 to 7.2m alongside and are used by work boats and local coasters.

Berths No. 6, Berth No. 7, and Berth No. 8 lie on the SE side of Jette de large and have a combined length of about 635m. They have depths of 7.8 to 9.3m alongside and are used for general cargo.

Berth No. 9, lying at the S end of Mole de Fontainebleau, is about 200m long and has a depth of 9m alongside.

Berth No. 10, Berth No. 11, and Berth No. 12 lie on the W side of Jetee du Large and have a total length of 710m. These berths have depths of 10.5 to 12m alongside and are used by tankers.

Berth No. 13, lying on the N side of Mole Nord at the W end, is 210m long and has a depth of 9.7m alongside.

Berth No. 14 and Berth No. 15, lying E of Berth No. 13, have a combined length of 397m and depths of 12m alongside.

The berths on the N side of Mole Nord are approached through a channel, 150m wide, which has been dredged to a depth of 12m. A depth of 1.3m was reported (1995) to lie close N of Berth No. 15.

A ro-ro berth, 220m long, is situated at the W face of Mole Sud and has a depth of 11m alongside.

There are facilities for general cargo, reefer, container, bulk, tanker, cruise, and ro-ro vessels. Vessels up to 300m in length and 11m draft can be accommodated.

Aspect.—The roadstead lies between Plateau de Heron (11° 37.3'N., 43° 09.0'E.) and Pointe Noire (Mangadafa), about 4.7 miles WSW. Pointe Noire is low, but terminates in two small brown hills. The Houmbouli River flows into the S side of the roadstead, which is encumbered with drying coral reefs.

Djibouti stands on a peninsula, with Plateau de Heron at its N end. Banc de Heron, a drying coral reef, extends up to 1 mile W of Plateau de Heron.

In clear weather, Direction Hill (11° 29'N., 43° 07'E.), a double peak, 166m high, rising about 8 miles SSW of the port, forms a good landmark in the approach to the roadstead.

A prominent beacon stands at an elevation of 127m, about 4.2 miles SW of the port.

Two prominent radio masts stand about 0.4 mile E of the port; two tank farms are situated between them and the harbor basin. A conspicuous water tank, 31m high, stands about 1 mile ESE of the port, close E of the railroad station. Two conspicuous gantry cranes are situated on Mole Sud, at the SE side of the main basin.

An aeronautical light is shown from a structure standing in the vicinity of the airport, about 3.5 miles SSE of the port.

The approach channels are indicated by lighted ranges, which may best be seen on the chart.

Pilotage.—Pilotage is available on a 24-hour basis and is compulsory for vessels 300 tons. Pilots can be contacted by VHF and board in the vicinity of Lighted Buoy No. 2 (11°

37.5°N., 43° 07.9'E.), moored off the NW side of Banc du Heron.

All vessels should sent an ETA through Djibouti (J2A) 48 hours and 8 hours in advance. They should then establish contact and keep a continuous listening watch on VHF channel 12 when passing Ile Maskali Light (11° 43'N., 43° 09'E.).

Regulations.—The vessel's engines should be kept operational, unless permission has been granted by the harbor master to the contrary.

Signals.—Traffic signals are displayed from a signal station, consisting of a flagstaff surmounting a blue building, situated on the NE end of Jetee du Large. Vessels can communicate with this station by means of the International Code of Signals.

Anchorage.—A designated anchorage area, the limits of which may best be seen on the chart, lies centered 1.6 mile NW of the port. It has depths of 11 to 22m and lies between Recif de Houmbouli and Banc du Pinguin.

A designated anchorage for LASH vessels, with a depth of 15m, lies about 0.4 miles W of the head of Mole de Fontainebleau.

Directions.—Vessels approaching from N should first make a landfall off Ras Bir (11° 59'N., 43° 22'E.) and then steer for a position lying about 5 miles NNW of Iles Musha. From this position, vessels should make good a course of 240° until the lighted range at the head of the roadstead is sighted.

When the sun is high, the reefs around Iles Musha are clearly visible. During the day, the lighted range beacons are reported to show up well against the brown background of Direction Hill.

If the lighted range cannot be seen after a vessel rounds Iles Musha, as the case may be during sandstorms, the W edge of Plateau du Heron in range, bearing 161°, with the prominent water tower standing on Plateau du Serpent, close E of the railroad station, will lead clear of the dangers lying W of Iles Musha.

Caution.—A prohibited anchorage area, the limits of which may best be seen on the chart, lies close W of the port and extends up to 2 miles N.

During the Southwest Monsoon, swells up to 2.5m in height have been experienced at the berths on the outer side of Jetee Large.

10.14 The coast between Port de Djibouti and Baie Dalwakteak, about 11 miles SE, is low and thickly covered with mangroves. The coastal reef off this stretch of coast extends up to 1.5 miles offshore and mostly dries.

An area prohibited to navigation extends up to 3 miles off this coast, from a point about 2 miles NW of Ile Waramos to the Somali border.

A prohibited anchorage containing submarine cables extends from the E side of Djibouti, E for about 9 miles, thence NE for 8 miles. Both areas are best seen on the appropriate chart.

Ile Waramos (11° 33'N., 43° 11'E.) lies on the coastal reef SE of Port de Djibouti. Several above-water rocks stand in the vicinity of this islet.

Baie Dalwakteak (11° 29'N., 43° 16'E.), entered between a point about 4 miles SSE of Ile Waramos and Ras Gumarlah, about the same distance further SE, provides sheltered anchorage.

Ras Gumarlah is the outer extremity of a low, sandy irregular strip of land which extends a short distance N from the coast, and then about 1 mile to the W.

An islet lies on the coastal reef, about 1 mile WNW of Ras Gumarlah.

Small vessels with local knowledge can anchor in Baie Dalwakteak, in a depth of 7.3m, but it should only be approached at LW when the dangers are visible.

Anchorage can also be taken close outside this bight, in a depth of 12.8m.

Gutta Tella Ousal (11° 32'N., 43° 14'E.), a drying reef, lies about 6 miles NW of Ras Gumarlah.

10.15 Moidubis Kebir (11° 33'N., 43° 17'E.), a steep-to reef, drying in places, extends about 2 miles N from a position about 5 miles NNW of Ras Gumarlah.

Moidubis Seghir (11° 30'N., 43° 16'E.), a steep-to reef, drying in places, lies about 4 miles NNW of Ras Gumarlah. A detached 5.5m patch lies 0.5 mile off the SE side of this reef.

The depths charted in an area formed by a line extending ESE from Plateau du Heron to Moidubis Kebir then SSW to the shore at Loyada, differ greatly from those determined by an earlier French survey.

The coast between Ras Gumarlah and Saylac, about 12 miles ESE, is bare and swampy. The coastal reef, which dries in places and has several islets on it, extends up to 3 miles offshore.

A narrow sandbank, which partially covers at HWS, extends 2 miles NE and then 3.5 miles N from a position about 3 miles SE of the end of Ras Gumarlah. This bank is surrounded by Recif Turuhut.

This reef extends 1 mile N and then 2 miles NE from the N extremity of the sandbank and has irregular depths of 3.7 to 11m, with many rocky heads. The N extremity of Recif Turuhut dries in places.

General depths of 18.3 to 20m exist in the bight W of Recif Turuhut, but four detached rocky patches lie up to 2.5 miles W and 3.5 miles WNW of the N end of the sandbank on Recif Turuhut.

Besides a rocky patch located about 3 miles SE of the N end of the sandbank, the bight E of the sandbank has depths of 10 to 18.3m, and is apparently clear of dangers.

Mosheikh Islets (11° 26'N., 43° 22'E.), bush-covered, stand on the coastal reef SE of the above sandbank.

10.16 Saylac (Zeila) (11° 22'N., 43° 28'E.), a small town in poor condition, stands on a sandy spit projecting from the coast and almost level with the sea. The district commissioner's house, with a flagstaff nearby, stands in the NE part of the town and is the most conspicuous house. The customhouse stands in the same part of the town.

A shallow stone pier extends NW from the NW part of the town. A small hospital and dispensary are available.

During the Southwest Monsoon, the heat is excessive and most of the people leave for the interior. Cargo is handled in the roadstead about 2 miles N of the town.

Tides—Currents.—The currents usually set with the winds along the coast off Saylac and sometimes attain a velocity of 0.5 knot. In the roadstead, the currents often set against the wind, although the latter may be fairly strong.

At springs, the tidal currents usually set W through the roadstead during the flood and E during the ebb, at a rate of about 0.5 knot, but the direction is greatly influenced by the winds.

Shac Siigaale (Sea Gull Shoal) (11° 24'N., 43° 37'E.), about 9 miles ENE of Saylac, and Shaab Filfil, about 2 miles of Shac Siigaale, are both steep-to on their E sides. These two reefs are always covered and never are clearly visible.

A low, sandy spit on which Saylac is built extends about 3 miles from the coast and then continues for 1.5 miles as a shoal, which dries in places. Shoals, with depths of less than 5.5m, continue toward Shac Siigaale. A detached reef, which dries, lies about 1 mile W of the N end of Shac Siigaale.

Several shoals, with depths of 5.5 to 9.1m, lie between and W of these two reefs, but less water than charted has been reported to exist in this vicinity.

Depths in the approaches to Saylac are reported to be considerably less than charted.

10.17 Ceebaad (Aibat Island) (11° 30'N., 43° 28'E.), about 9 miles N of Saylac, is low, sandy, and covered with bushes. It stands on the W part of a reef, which dries at LW, and extends about 2 miles N, 3.5 miles E, and 1 mile SE, respectively, from the island. A detached reef lies about 0.5 mile WNW of the N end of the island; a shoal with depths of 2.7 to 5.6m, extends about 2 miles SW from the SW end of the reef.

A beacon, standing on the N end of Ceebaad, consists of a sand-colored cone, with a black ball topmark. The beacon is usually visible only when the sun is in a favorable position.

Saacada Diin (11° 26'N., 43° 28'E.), about 3 miles S of Ceebaad, is low, sandy, and almost covered with bushes about 6.1m high. The island is fringed by a drying bank, which extends about 0.5 mile from the E side and 0.5 to 1 mile from the other sides.

A shoal, with a least depth of 0.3m, joins the E side of the drying bank surrounding Saacada Diin and extends about 2 miles NE. A 4.6m shoal lies about 2 miles E of the SE end of Saacada Diin.

The area between Saacada Diin and the coast to the SW is almost completely obstructed by drying shoals with depths of less than 5.5m.

10.18 Channel Reef (Recif du Chenal) (11° 28'N., 43° 33'E.), with a least depth of 2.1m, coral, lies about 6 miles ESE of the N end of Ceebaad. The passage between this reef and the reef extending E from Ceebaad has depths of 1.8 to 16.5m; the passage between Channel Reef and Recif Filfil has a least depth of 6.4m.

The roadstead N of Saylac provides anchorage, in depths of 7.3 to 9.1m, sand and mud, good holding ground. The best berth lies about 2 miles N of Saylac, in a depth of 7.3m.

During the Northeast Monsoon, a moderate swell sets into the roadstead, generally increasing in the afternoon. It has been reported that due to heavy silting at the anchorage, the charted depths cannot be relied on.

Directions.—The best time to approach Saylac is in the morning. A good lookout should be posted aloft and soundings taken continuously, because no landmarks are visible on the low land for ascertaining the vessel's position.

When within a line joining Ceebaad and Shac Siigaale, the water is usually very discolored, making it impossible to distinguish between the deep water and the shallow water.

Saacada Diin, the beacon on Ceebaad, and the town of Saylac should be visible from aloft when about 1 mile offshore of Recif Filfil. Conical Hill, about 11 miles WSW of Saylac, is 118m high, and may be a useful mark in clear weather.

The beacon on Ceebaad is the best mark when approaching from the N. From a position about 5 miles E of this beacon, make good a course of 195°, which is about 0.5 mile W of Channel Reef. When the S end of Saacada Diin bears about 270°, make good a course of 243°, which leads to the anchorage.

If coming from the SE and entering by the same passage, keep in depths of not less than 36.6m until the beacon on Ceebaad bears 290°. Steer for this beacon on this course until it is about 5 miles distant, or until the NW end of Saacada Diin bears 245°. Course can then be altered for the anchorage as previously directed.

The low, swampy coast between Saylac and Raas Maskan, about 12 miles SSE, is backed by a range of sand hills, 9 to 73m high, which stand about 2 miles inland. This range of hills continues SSE for about 13 miles to Khor Galangareet at distances of 1 to 2 miles inland.

A low sandy plain extends from Khor Galangareet to the base of the mountains, about 20 miles inland. This coast is fringed by reefs and shoals extending up to 1.5 miles offshore.

The 20m curve off the coast between Saylac and Khor Galangareet extends S from a position close E of Shac Siigaale and gradually closes the coast.

10.19 Raas Maskan (11° 12'N., 43° 33'E.) is low, round, and slightly projecting.

Khor Maduji (11° 07'N., 43° 35'E.), about 5 miles SSE of Raas Maskan, is reported to be connected by a backwater with Khor Galangareet. Both of these rivers are available only to small boats.

Shacaabi Shiikh Yacquub (Shab Sheikh Yakab) (11° 18'N., 43° 34'E.), about 6 miles SE of Saylac and 4 miles offshore, has a least depth of 1.8m.

A rocky 4.6m patch lies midway between Shacaabi Shiikh Yacquub and the coast; a small 9.1m patch lies about 2 miles SSE of this same reef.

A 5.5m patch lies about 7 miles SSE of Saylac and 1.5 miles offshore. A reef, with a depth of less than 1.8m, lies about 3 miles NE of Ras Maskan. Depths of 9.1m lie close N and S of this reef.

A shoal, with a least depth of 1.8m, lies about 1.5 mile NNE of the entrance of Khor Maduji; the sea breaks heavily on this shoal at times.

Shab Maduji (11° 03'N., 43° 40'E.), about 5 miles SE of the entrance of Khor Maduji, has a drying part near its SE end. A 3.6m patch lies about 0.5 mile W of the drying part of Shab Maduji.

Shacaab Galangareet (10° 57'N., 43° 44'E.), a rocky patch with depths of less than 1.8m, lies about 6 miles ESE of the entrance of Khor Galangareet and 1.5 miles offshore.

The coast between Khor Galangareet and Berbera is generally bold, with depths of 11 to 12.8m close in, and with

the exception of Shab Galangareet, no known dangers exist seaward. This part of the coast has not been closely examined and great care should be taken when approaching.

Lughaye (Dagarita) (10° 40'N., 43° 57'E.), about 11 miles SE of Shacaab Galangareet, is the name of a district. The low coast in the vicinity is bush-covered for many miles. The town may be recognized by two small clumps of palm trees, which show up well from either the SE or NW. In clear weather, the high mountains in the vicinity are visible.

Anchorage can be taken by small vessels with local knowledge, in a depth of 11.9m, about 0.5 mile offshore.

Sabawanaag (Saba Wanak) (10° 33'N., 44° 07'E.), about 13 miles SE of the palm trees at Lughaye, may also be identified by a clump of date palms near the coast.

Anchorage can be taken by small vessels, in a depth of 11m, sand, about 0.7 mile offshore.

10.20 Bullaxaar (Bulhar) (10° 24'N., 44° 24'E.), once very important commercially, is now practically deserted. The town is difficult to distinguish, especially if the sun is behind.

Close E of Bullaxaar, there are some conspicuous date palms, which are the only trees near the coast between this place and Berbera.

Jebel Elmis (10° 21'N., 44° 12'E.), a rugged, irregular mountain, is 610m high. It rises about 13 miles SSE of Sabawanaag and is an excellent landmark.

It has been reported that the best time to approach the anchorage is at dawn or shortly thereafter, when the white houses of the town stand out well.

A small sandbank, awash in places, parallels the coast off Bullaxaar about 0.1 mile offshore. The W end of this bank lies N of the residency. The smoothest water for landing is found by passing around the W end of this bank, but small boats can pass over it at HW.

Partially-sheltered anchorage can be taken by small craft between this bank and the coast. A heavy surf rolls in throughout the year and during bad weather.

Anchorage can be taken, in depths of 11 to 12.8m, about 0.5 mile offshore, with the town bearing between 150° and 200°. When about 2 miles from this anchorage, reduce speed and approach cautiously, because the depths shoal rapidly.

Berbera (10° 27'N., 45° 01'E.)

World Port Index No. 47820

10.21 Berbera, a medium-size port used by general cargo vessels and oil tankers, stands at the head of a natural inlet. The tankers are handled at an offshore mooring berth lying about 0.5 mile WSW of the main port facilities.

Winds—Weather.—From the middle of the afternoon until about midnight, a staff breeze blows from the NE; from midnight until noon, a calm prevails. During the Southwest Monsoon, the climate is very hot though not unhealthy, but during the Northeast Monsoon, it is comparatively cool; with a good breeze outside, it is comparatively calm within the harbor.

Tides—Currents.—The mean tidal rise here is 1m while the diurnal rise is 1.7m. Tidal currents are negligible.

Depths—Limitations.—There are depths of 20 to 32m in the approach to the harbor, decreasing to 11m off the berths.

An offshore mooring buoy berth is situated on the SW side of the harbor. A steel pier carrying pipelines extends 0.3 mile NW and connects the berth to the shore. Tankers up to 165m in length and 8.5m draft can be handled.

A quay, 640m in length, is situated on the S side of the harbor, close E of the oil terminal. It is connected to the shore by two bridges and has a depth of 9.8m alongside. There is a ro-ro berth at the W end. Vessels up to 12,000 dwt and 8.8m draft can be accommodated.

Aspect.—The port lies within an inlet located between the coast and a low sandy spit extending about 2 miles WSW from the shore. Raastamar (Tamar Point), marked by a light with a radar reflector, is the outer extremity of this spit.

A high irregular mountain range stands SE of Berbera. Great Gap, a remarkable pass through the mountain range, stands about 8 miles SE of the port. Six peaks, all inclined to the E, may be viewed though this gap when it is bearing SSW.

A prominent hill stands about 13 miles WSW of Raastamar and 2.5 miles inland. It is 249m high and has a white, sandy patch on its N side.

A small round hill stands about 5 miles SSW of Raastamar. It is 113m high and has a white, sandy patch on its E side. This conspicuous hill is the highest in the vicinity of the port.

A light is shown from a white tower standing on the coast, 1.5 miles SSW of Raastamar Light.

A prominent group of oil tanks is situated on the coast, about 1.3 miles SE of Raastamar Light. Most of the town buildings stand near the head of the inlet. The Shaab, the residential quarter, is situated close S of the head. It is surrounded by a wall, 5m high. Several radio masts stand 0.5 mile S of the Shaab.

A large conspicuous warehouse stands on the general cargo wharf. A conspicuous stranded wreck is reported to lie close off the E side of this wharf.

The approach is marked by lighted buoys, which may best be seen on the chart. A lighted range, situated at the head of the inlet, indicates the approach to the inner anchorage.

Pilotage.—Pilotage is compulsory for all vessels over 200 nrt and is available during daylight hours only. Vessels should send their ETA 48 hours in advance to Barbera Port Control through Aden (7OA). Vessels should contact the Port Control on 8122 kHz RT and state the following:

1. Vessel name.
2. Flag.
3. Call sign.
4. Draft fore and aft.
5. GRT.
6. NRT.
7. Discharge tonnage and type.

Pilots can be contacted by VHF. During good weather, pilots board at the outer anchorage 0.5 to 1 mile SW of Raastamar Light. During inclement weather, pilots board in the inner anchorage.

Anchorage.—A designated outer anchorage area, the limits of which may best be seen on the chart, lies centered 0.7 mile SW of Raastamar Light and has depths of 15 to 31m.

A designated inner anchorage area, the limits of which may best be seen on the chart, lies centered 0.6 mile ESE of Raastamar Light and has depths of 17 to 20m.

The holding ground at the inner anchorage is reported to be good, but caution is necessary, as depths at the NE corner of the area were reported to be less than charted. Whatever the sea state or direction of the wind, vessels are required to remain N and clear of the harbor entrance range.

Directions.—Vessels should head S for the light shown from the mainland coast and pass about 0.3 mile W of Raastamar, but care should be taken against a current which sets E toward the point. A lighted range then leads to the inner anchorage.

Caution.—Caution is necessary because, during the monsoon, blowing sand occasionally obscures the range; trees in the vicinity of the front range beacon may make that structure difficult to see.

During the trading season, October to March, the lights of the navigation aids may be difficult to distinguish from the riding lights of dhows anchored close inshore.

It was reported (1993) that much of the port facilities and aids had been damaged. Silting in the inlet was also reported.

10.22 The coast between Berbera and Raas Khansiir, about 53 miles ENE, is low and sandy. The bottom near the coast consists of sand and shells, while off the coast the bottom is sand and coral.

The depths are more suitable for anchoring off the NE half of this part of the coast.

Ras Calveyn (10° 31'N., 45° 06'E.) is low and sandy, with a 3.7m rocky patch about 0.5 mile NW of it. Siyara, about 11 miles ENE of the point, is deserted and in ruins.

Exposed anchorage can be taken, in a depth of 9.1m, about 0.5 mile off Siyara. The coast between Ras Xatiib, about 7 miles NE of Siyara, and Ras Cuuda, about 17 miles farther ENE, is fringed by depths of less than 5.5m, which extend up to 1 mile offshore.

Anchorage can be taken, in depths of 11 to 14m, between 1 mile and 1.5 miles off the village of El Darad, about 3 miles SSW of Ras Cuuda.

Small vessels can obtain shelter from E winds in the area between Ras Xatiib and Ras Cuuda, which is reported to recede more than shown on the chart.

Raas Xamra (10° 48'N., 45° 43'E.), about 7 miles ENE of Ras Cuuda, is slightly projecting and 72m high. When seen from the W, this black point shows up well.

Karin (10° 50'N., 45° 47'E.), a village about 4 miles ENE of Ras Xamra, stands in a valley with a white sandy patch on its SW side. This deserted village is similar to El Darad, but contains more huts. A reef and a sandspit extend about 0.5 mile offshore abreast of the village.

Sheltered anchorage can be taken, in depths of 7.3 to 18.3m, sand, about 0.5 mile W of Karin.

A vessel has anchored, in a depth of 25.6m, about 0.5 mile offshore with a prominent stone house at Karin bearing 135° and the NW bluff of Raas Khansiir bearing 073°.

Raas Khansiir to Raas Xaafuun

10.23 Raas Khansiir (10° 52'N., 45° 49'E.), low and rocky, is marked by sandy beaches on both sides. From the NW, the

point is easily identified by a large triangular patch of sand near it, backed by a dark hill. A range of irregular hills rises inland from the point. Tri-Khiil (Tree Hill), 620m high, stands about 5 miles S of the point.

Anchorage has been taken, in a depth of 36.6m, with Tri-Khiil bearing 155° and **Black Peak** (10° 38'N., 45° 35'E.) bearing 220°. The coast up to 22 miles E of Raas Khansiir is backed by a range of undulating hills. Jebel Mara, about 24 miles ESE of Raas Khansiir, is isolated, and Sugarloaf Peak, about 5 miles farther SE, rises to a height of 303m.

Ankhor Peak (10° 32'N., 46° 11'E.), 1,128m high, stands 12 miles S of Jebel Mara. Jebel Warsangeleh, a high range 10 to 25 miles inland, extends about 140 miles E from **Pyramid Peak** (10° 43'N., 47° 00'E.), which is 1,570m high. This range is level with its crest and has no prominent peaks. The E half of this range consists of a limestone ridge, 1,829 to 2,133m high, steep on its N side, with a gradual slope on its S side.

Shimber Berris (10° 44'N., 47° 15'E.), about 15 miles E of Pyramid Peak, is the summit of this range and rises to a height of 2,408m. Toward the lower coastal hills, and at each end, the range descends in steps, forming vertical slopes 244 to 305m high.

Jebel Mait (10° 55'N., 47° 03'E.), 396m high, about 12 miles NNE of Pyramid Peak, stands N of the W end of Jebel Warsangeleh.

Quoin Hill (11° 00'N., 47° 23'E.), rising about 21 miles ENE of Jebel Mait, is distinguishable only from the N.

Jebel Buredo, an isolated sugarloaf hill, about 6 miles NNE of Quoin Hill, and Jebel Alat and Jebel Barait, about 7 and 12 miles, respectively, SE of Jebel Buredo, are other peaks in the vicinity. Jebel Buredo is the only conspicuous peak.

Gheljoga (11° 06'N., 48° 52'E.), N of the E end of Jebel Warsangeleh, is a conspicuous double peak, 638m high. This peak stands in the mountain range beyond the low and broken coastal range of sand hills. A remarkable gap in the coastal range stands close NE of Gheljoga. Bur Bodet, 870m high, is the highest peak of a range of hills near the coast, about 32 miles ENE of Gheljoga. Jebel Antara, about 14 miles farther ENE, is a rocky table range, 1,300m high, which is thickly-covered with vegetation and trees.

Bur Corcori, 2,020m high and the highest mountain in the vicinity, stands about 10 miles SE of Jebel Antara, about 17 miles farther E; a ridge of limestone mountains extends about 32 miles ENE and then turns SSE to a hummock-shaped mountain, visible from a great distance. Another range of similar mountains extends ESE from this mountain.

10.24 Gwardafuy (Ras Caseyr) (11° 50'N., 51° 18'E.), which is further described in [paragraph 10.36](#), is the NE extremity of Africa, and rises to a height of about 244m. From the cape S, the Jebel Gural Range extends SW and S and is separated by a valley. A conspicuous knob stands on the tableland NW of the above range, about 9 miles SW of Gwardafuy. About 2 miles NW of this knob, and separated from it by a deep ravine, is a sharp peak 891m high.

Gheizani, 833m high, stands in the N part of Jebel Gural, and is conspicuous from S because of the steep slope of its E end. Dehfo, 741m high and conspicuous, stands near the S end of

Jebel Gural; a conspicuous knob, 591m high, stands at the S end.

From Jebel Gural to the S, the coast is backed by a range of flat tableland, 152 to 183m high. Abd al Kuri, about 52 miles ENE of Gwardafuy, consists mostly of mountains, except in its central part, rising to an elevation of 600 to 622m in the E part and 269m in the W part. More information may be found in [paragraph 10.40](#).

The Brothers consist of two islands standing about 35 and 50 miles E, respectively, of Abd al Kuri. The W island is 780m high and the E island is 391m high. Suqutra, about 130 miles ENE of Gwardafuy, rises to a height of 1,519m in Jabal Haggier, about 30 miles W of the E end of the island.

Tides—Currents.—During the Northeast Monsoon, a countercurrent occasionally sets E along the African coast, between **Mait Island** (11° 13'N., 47° 13'E.) and the meridian of 49° E, at a velocity of 0.5 to 2.5 knots.

Currents have also been reported setting toward the coast, at velocities of 0.5 to 1.5 knots.

During the Southwest Monsoon, an eddy current sets W along the African coast to near the meridian of 45° E, at a velocity of about 1.5 knots. However, this current is not continuous, and E and S sets are also experienced.

The strongest W currents reported many years ago between the meridians 48° E and 50° E, had a velocity of about 0.5 knot.

Variable currents were experienced off the Somali coast, and occasionally countercurrents were experienced near the coast. The former usually set W at a rate of 0.5 knot. In May, a strong S current was experienced near Ile Mait. Except for a slight W set off Ile Mait, no current was experienced, at the end of February, many years ago, between Berbera and Las Khoreh.

Years ago, a vessel while proceeding E at a distance of about 30 miles off the coast of Qooriga Gobed Rugguuda, experienced a S current with a velocity of about 1 knot and was set well into this bay; very little W current was experienced. Ile Mait was then closed, and a course of 000° was steered for 4 hours; the island was visible for the first 3 hours and no E or W current was experienced.

Course was altered for Las Khoreh at 2045 and speed adjusted to arrive at 0700. In the morning, the course had been made good, but the vessel was 20 miles behind the dead reckoning position, a WNW current having apparently been experienced from about midnight. The wind was not more than force 2.

Depths—Limitations.—The 200m curve between Raas Khansiira and Gwardafuy generally parallels the coast, at distances of from 1 to 7 miles offshore, except in the vicinity of **Ile Mait** (11° 13'N., 47° 13'E.). In this vicinity, the 200m curve lies up to 10 miles offshore. South of Gwardafuy, the 200m curve lies from 7 to 30 miles offshore. The only known danger in the vicinity of this curve is a 18.3m patch lying about 14 miles ENE of **Raas Xaafuun** (10° 27'N., 51° 24'E.).

Abd al Kuri lies on a 200m bank, which extends up to 2 miles N, 13 miles E, 5 miles S, and 3.5 miles W, respectively, of the island.

The Brothers and Suqutra lie on an extensive bank which has depths of less than 200m. This bank extends about 29 miles WSW and about 35 miles E and S of The Brothers, and probably more, but the locality has not been thoroughly examined. Those islets and dangers which lie in the vicinity of

the above islands will be described under the principal description of the coast which they front.

A bank, with irregular depths of 73 to 179m, coral, sand, and shells, extends about 20 miles E from a position about 15 miles NNE of **Ras Illaue** (11° 59'N., 50° 47'E.).

Within 13 miles N of the E extremity of this bank are two banks; the S bank has depths of 77m and the N bank has depths of 77 to 110m.

A bank, with a depth of 54.9m, was reported to lie about 42 miles NE of Ras Alula.

10.25 Gubed Canqor (10° 49'N., 46° 01'E.) is entered between Raas Khansiir and the village of Canqor, about 45 miles ENE. The low, sandy shore of this bight is bush-covered. Koor Shoor, a shallow lagoon, lies 3.5 miles ESE of Ras Khansiir. The reef-fringed coast at Canqor is not suitable for landing.

Anchorage can be taken, in a depth of 12.8m, sand and coral, about 0.5 mile offshore, at the village of Canqor. The best anchorage lies off Raas Khansiir, where the holding ground is good.

Gubed Rugguuda (10° 47'N., 46° 36'E.) is entered between a point about 2 miles E of Canqor and Raas Jilbo, about 45 miles ENE. The low, sandy shore of this bay is fringed in places by shoals. At times, even during the Northeast Monsoon, a considerable swell sets in.

Nasiga (10° 41'N., 46° 30'E.), a deep ravine about 15 miles ESE of Canqor, is marked by several streams during the rainy season.

Ruggunda (10° 42'N., 46° 37'E.), a village, in ruins, is not easily identified. A salt water lagoon and heavy vegetation is found in the vicinity.

A vessel anchored about 1 mile NNW of the lagoon entrance, in a depth of 12.8m, with very good holding ground.

10.26 Mulaax Beyle (Shulah) (10° 46'N., 46° 42'E.) stands on Raas Shulah, at the mouth of a stream, about 6 miles ENE of Raggunda. The village consists of several stone buildings and huts. The mouth of the stream can be identified by the vegetation in the vicinity. Finger Peak, pointed and about 4 miles SE of Raas Shulah, is a good mark in the approach to the village.

Anchorage can be taken off Raas Shulah, in a depth of 23.8m, with Finger Peak bearing 130° and Heis Islet to the ENE bearing 060°. Pyramid Peak, previously described in [paragraph 10.23](#), Xiis, and Haycock, a peak about 11 miles WSW of Finger Peak, are useful marks when approaching this anchorage.

Xiis (Heis) (10° 53'N., 46° 54'E.), about 14 miles ENE of Raas Shulah, consists of some stone houses which are only inhabited during the trading season. A white house and a fort are conspicuous. A shoal, with some coral reefs, awash, extends about 0.5 mile offshore in the vicinity of this village.

Xiis (10° 54'N., 46° 54'E.), about 2 miles NNE of Xiis, is rocky and 52m high. It is connected by a causeway with Jebel Ret, a high bluff on the coast. This causeway dries about 0.6m.

A steep conspicuous ridge extends S from Jebel Ret to a gap SE of Xiis. A rock, with a depth of less than 1.8m, lies close N of the islet.

Sheltered anchorage can be taken, in a depth of 22m, with the center of Xiis bearing 057°. A vessel anchored, in a depth of 22.9m, with Xiis bearing 053° and the fort in Xiis bearing 165°.

10.27 The coast between **Raas Jilbo** (10° 56'N., 46° 59'E.) and Raas Xatib, about 11 miles NE, is sandy for the first 7 miles and cliffy for the remaining distance.

From Raas Xatib to within about 3 miles of Raas Surud, about 22 miles ENE, the coast is low, sandy, and sparsely covered with bushes; a short distance inland then to Raas Surud, it is composed of low cliffs.

Mait (10° 58'N., 47° 04'E.), a village on a small plain, consists of some buildings and is almost uninhabited. A conspicuous white tomb stands 2 miles WSW of Mait. Mait carries on a small coastal trade with Aden and Al Mukalla.

Sheltered anchorage can be taken close to the coast NE of Mait in deep water, or in depths of 11 to 12.8m, about 0.5 mile offshore W of Mait. The stern of the vessel when swinging head on to the WNW wind will be in a depth of 13.7m.

Marso Saneekhaal (11° 01'N., 47° 07'E.), formed by a sandspit extending SW from the coast, lies close SW of Raas Xatib.

Good anchorage can be taken, in depths of 12.8 to 22m, about 183m offshore sheltered from winds from the ENE. Vessels have anchored in a depth of 22m within 0.5 mile of the shore.

Raas Xatib (11° 03'N., 47° 08'E.), about 6 miles NE of Mait, has a small inlet nearby. Anchorage can be taken, in a depth of 22m, sand, about 183m off Raas Xatib.

Senacca (11° 04'N., 47° 12'E.), about 5 miles ENE of Raas Xatib, is sheltered by a low sandspit extending from the coast. This spit is difficult to make out from seaward but if a vessel steers for the coast about 0.5 mile E of a conspicuous strip of fair-sized shrubs, this spit will soon be visible on the port bow.

A moderate-sized vessel with local knowledge can take excellent but confined anchorage off Senacca.

Raas Xumbays (11° 07'N., 47° 16'E.), about 8 miles E of Raas Xatib, is low and sandy.

Bandar Xarshow (11° 10'N., 47° 24'E.), about 10 miles ENE of Raas Xumbays, consists of a small village, with a few inhabitants during the trading season from October to May. It consists of the ruins of a large building and a few huts.

A breaking reef extends up to 0.2 mile offshore between a position about 2 miles W of Bandar Xarshow and Raas Surud.

A bank extends about 0.5 mile offshore abreast Bandar Xarshow.

Maydh (11° 13'N., 47° 13'E.), about 6 miles NNW of Raas Xumbays, is 131m high and composed of bare rock covered with guano. A remarkable cove indents the S side of the island but its entrance is blocked by some large stones.

A spit, with a least depth of 3.7m, extends about 183m from the E end of the island.

General depths in the passage between the island and the mainland are 23.8 to 45.7m, but lesser depths exist near both pieces of land.

10.28 Ghubbet Kalweyn (11° 09'N., 47° 42'E.) is entered between Raas Surud and a position on the coast about 19 miles ESE. The shores of this bight and for a distance of about 9

miles farther E to Raas Kalweyn are low, sandy, and bush-covered a short distance inland.

Caution.—Raas Surud has been reported to lie about 1 mile N of its charted position.

The 40m curve lies from 1.5 to 3.5 miles offshore, the bottom being sand, coral, and shells. A shoal, with depths of less than 5.5m, fringes the coast between the E entrance point of Ghubbet Kalweyn and Raas Kalweyn, and extends up to 1 mile offshore.

Waqddariya (11° 06'N., 47° 46'E.), a village about 4 miles WSW of the E entrance point of Ghubbet Kalweyn, consists of two forts and a large number of huts. This village is inhabited only during the trading season, from October to May.

The village is inconspicuous from seaward, but the village of Geelweyte, about 10 miles to the E, is easily made out. This latter village is also inhabited during the trading season.

Anchorage, sheltered from E winds, can be taken by vessels with local knowledge, in a depth of 18.3m, off Waqddariya.

Care should be taken when approaching this anchorage to avoid a reef which projects from the coast. Vessels with local knowledge, can anchor about 0.5 mile off Geelweyte, in a depth of 12.8m. The coast E of Raas Kalweyn continues low and sandy and is backed inland by a range of rolling hills.

Two of these hills are conspicuous because of the rough appearance of their cliffs. A spur of the mountain range slopes down to Raas Kalweyn. The coast continues low and sandy as far E as Raas Laas Macaan.

Dhoabgo (11° 08'N., 48° 03'E.) and Qoticad are two inconspicuous villages, in ruins, standing near the coast about 6 and 13 miles E, respectively, of Raas Kalweyn.

Laasqoray (11° 10'N., 48° 12'E.), about 3 miles NE of Qoticad, consists of two large villages on the coast about 0.5 mile apart. Two easily recognized stone buildings stand in the SW village and appear as forts.

A conspicuous white fort, a square building surmounted by a white tower with a flagstaff close W of it, stands about 0.5 mile SE of the NE village. A conspicuous dark tree has been reported to stand about 183m W of the white fort.

A conspicuous bluff, about 2 miles NE of Laasqoray, appears dark against the background when seen from a long distance to the W. A conspicuous conical hill, visible only on SSE bearings, stands at the end of the ridge ESE of Laasqoray.

Good anchorage, with no shelter from offshore winds, can be taken between 0.4 and 0.7 mile NW of the SW village, in depths of 9.1 to 16.5m, sand or soft sandstone rock.

Anchorage can also be taken, in depths of 9.1 to 11m, about 0.5 mile N of the mosque in the NE village.

10.29 Raas Laas Macaan (11° 12'N., 48° 14'E.), low and sandy, is marked by a conspicuous white tower, numerous huts, and several small sand hills. A brackish inlet lies close SW of the point.

Raas Gacaan (11° 17'N., 48° 22'E.), low and sandy, lies about 9 miles ENE of Raas Laas Macaan and is reported to lie about 0.5 mile NW of its charted position. Several inlets lie near the point and close S is a fresh water lake. The village of Gacaan, marked by a fort, stands on the SW side of Raas Gacaan.

Manna Hills (11° 07'N., 48° 26'E.), conspicuous and conical, stands about 11 miles SSE of Raas Gacaan. Two hills, about 2

miles S of Gacaan, appear as one conical hill when viewed from W. These hills are good marks.

Drying sandbanks front the coast for a distance of about 0.5 mile on each side of the fort at Gacaan. The water inside these banks is very shallow. The depths about 0.5 mile offshore are 22m, over a rocky bottom. It is not advisable to anchor off Gacaan because of the poor holding ground.

The coast between Raas Gacaan and Raas Cadcadde, about 18 miles to the E, is generally low, with an occasional hill.

Some conspicuous ruins and palm trees stand about 6 miles ENE of Gacaan.

Raas Dhofille (11° 19'N., 48° 32'E.), low and sandy, stands about 9 miles E of Raas Gacaan. Flat Hill, a conspicuous isolated tableland about 183m high, stands close S of the point and appears as an island when viewed from any distance to the W.

Durduri (11° 19'N., 48° 36'E.), a village about 5 miles E of Raas Dhofille, has a fort at each end and a large yellow building in the middle. An inlet, blocked at its entrance by a sandbank, stands near the village.

Anchorage has been taken, in a depth of 19.2m, with the W fort bearing 195°, distant 0.5 mile. The surf in the vicinity is broken and dangerous.

10.30 Ras Cadcadde (11° 20'N., 48° 40'E.), about 5 miles ENE of Durduri, consists of a rocky cliff, about 12m high, rising gradually inland.

A flat-topped hill, 183m high, stands among a group of hills a short distance inland. It has been reported that Raas Cadcadde is a good radar target at distances of up to 16 miles. The low coast E of Raas Cadcadde is marked by occasional hills. East of the group of hills, near Raas Cadcadde, a black tableland, about 91m high, approaches the coast.

Elayu (Ceelayu) (11° 14'N., 48° 54'E.), a small village, may easily be identified, as it stands at the E end of the above black tableland. A ridge, about 61m high and marked by numerous cairns, rises beyond Elayu. The village consists of three large towers and a large group of huts.

The W tower is a conspicuous brown fort, with a yellow top, resembling a castle; the middle tower is brown and in ruins; the E tower, which is the smallest, is white and conspicuous. A small square, white mosque stands on a low cliff above the foreshore. A watercourse, which becomes a torrent after rains, lies about 2 miles WNW of Elayu.

Anchorage can be taken, in a depth of 11m, about 0.5 mile offshore, with the W tower at Elayu bearing 168°; E of this position the water appears to be shallower. Anchorage can also be taken, in a depth of 25.6m, sand, with the W tower bearing 207°, distant 1 mile.

In general, anchorage can be taken anywhere near the coast in this vicinity, in convenient depths, sand and rock, but the anchorages are exposed.

Qoow (11° 15'N., 48° 59'E.), about 5 miles E of Elayu, is a small town with three conspicuous forts, a few white houses, and a large number of huts. The gap in the coastal range behind the town is a good mark. The coast in this vicinity is backed by a low, broken ridge of hills and intersected by several watercourses, which run only during the rare rainy periods.

Anchorage can be taken off Qoow, in a depth of 22m, sand and rocks, with the middle fort bearing 168°, distant 1.5 miles. Anchorage can also be taken closer in, but care is necessary because the depths shoal rapidly.

10.31 Boosaaso (Bander Cassim) (11° 17'N., 49° 11'E.), a town standing about 12 miles ENE of Qoow, is easily identified by the broad plain on which it is situated. It consists of a large number of masonry buildings, numerous huts, and a few forts and towers.

These forts and towers appear light brown or white from seaward. The small bed of a stream lies about 0.5 mile W of the town. There is also a conspicuous gap in the coastal range behind the town.

Coral reefs, with depths of less than 2m, extend up to 0.3 mile offshore abreast of the town. A dredged channel leads through the coral to an artificial harbor, which is protected on the N side by a breakwater.

The pier can accommodate vessels with a maximum length of 150m and a maximum draft of 6.5m. A range leads through the dredged channel.

Pilotage is available. Vessels transit during daylight hours only. During the karif, which occurs from July to early September, a violent SSE wind, locally known as the fora, begins about 1800 and blows all night until the following day, decreasing about 1400 hours.

This wind raises a short choppy sea and hinders landing operations. From 1400 to 1600, moderate N winds blow, raising a long swell which; hinders landing operations even more.

During such times, vessels have used two anchors, one of which was hove up when the wind abated. From May to July, weak northers, accompanied by good weather, usually prevails at Boosaaso.

Anchorage can be taken off the town on the alignment of the entrance range, in depths of 11 to 18.3m, about 0.5 to 1.5 miles offshore. Small craft, with local knowledge, can anchor, in depths of 2.4 to 3.4m, in the channel between the coral reefs.

Raas Axmar (11° 20'N., 49° 18'E.), a small conspicuous rocky promontory about 91m high, stands about 8 miles ENE, of Boosaaso. This promontory appears red when viewed from W. The coast between Raas Axmar and Raas Aantaara, about 16 miles ENE, is low and sandy. Raas Buur Gaaban, about 11 miles ENE of Raas Axmar, is high and rocky and is the only such elevation along this section of coast.

Bacaad (11° 21'N., 49° 27'E.), a village consisting of a fort and a few huts, stands about 2 miles SW of Raas Buur Gaaban; another village, consisting of a few houses and huts, stands 1.5 miles E of Bacaad. The depths off the coast in this vicinity, with the exception of a 3.7m patch about 0.5 mile NNW of Bacaad, are regular, increasing to depths of 36.6m, sand, about 0.5 to 0.75 mile offshore.

Good anchorage can be taken, in depths of 16.5 to 18.3m, about 2 miles offshore between Bacaad and Raas Buur Gaaban; this anchorage is sheltered only from offshore winds.

The coast between Raas Aantaara, which is high and rocky, and Raas Goragii, about 8 miles E, is sandy and bush-covered. Exposed indifferent anchorage, with good holding ground, can be taken off Raas Aantaara.

10.32 Raas Goragii (11° 29'N., 49° 42'E.), steep-to, high, and rocky, rises to a range of mountains 1,402 high, which extends ESE. The slopes of these mountains are tree-covered.

A village, with a fort and some huts in it, stands 1.5 miles WSW of the point. The coast between this point and Qandala is steep-to. Raas Goragii has been reported to be a poor radar target at distances up to 27 miles.

Qandala (Candala) (11° 28'N., 49° 52'E.), about 11 miles E of Raas Goragii, is a local shipping point. It consists of a fort, several houses and huts, and the residency. The fort stands E of a group of trees near the W end of the town which are good marks from the W.

The Northeast Monsoon is weak in the morning but gradually strengthens and attains its maximum intensity in the afternoon. The wind abates at sunset.

The Southwest Monsoon sometimes blows from the W with great force and raises a high sea and swell at the anchorage. At such time, vessels are advised to heave up and proceed to sea.

Anchorage can be taken, in depths of 12.8 to 16.5m, about 1 mile seaward of Qandala, with fairly good holding ground.

The coast from a position close NE of Qandala is fringed by a shoal with depths of less than 5.5m for a distance of 3 miles ENE; this shoal extends up to 0.5 mile offshore.

An inlet, which is used by small local craft during the rainy season at HW, stands 3.5 miles ENE of Qandala. A good mark, in the approach from the W is Qandala; a low white sandhill marked by a conspicuous bush when approaching from the E.

During offshore winds, anchorage can be taken by vessels with local knowledge, in depths of 11 to 18.3m, not less than 1.5 miles off the mouth of the inlet.

Care should be taken to avoid a shoal, with a depth of less than 5.5m, which extends about 1 mile NW from the entrance of this inlet.

Dhurbo (Durbo) (11° 37'N., 50° 20'E.), which consists of some houses, huts, and a mosque, stands on a low plain at the mouth of a valley, about 29 miles ENE of Qandala. A group of palms, visible from some distance seaward, stands close NE of the village.

10.33 Bandar Murcaayo (11° 41'N., 50° 28'E.) consists of stone houses, huts, and a fort with a white battlement. The village extends about 0.5 mile along the coast behind a line of sand dunes. A swamp, a watercourse, and three groups of palm trees stand NE of the village.

A considerable trade is carried on around the month of September. Vessels approaching this village should steer for a hummock-shaped mountain about 5 miles SSE of the village until it can be identified.

Care should be taken not to mistake this peak for a similar peak about 18 miles farther WSW, which may be the case if a vessel is W of its dead reckoning.

Another mark in this locality is a precipitous red hill, about 274m high, with a hole in its upper part.

Anchorage can be taken by vessels with local knowledge about 1 mile off Bandar Murcaayo, in depths of 9.1 to 18.3m, sand, good holding ground, with the mosque bearing 151°.

Traffic is often hindered from May to August by the unstable prevailing W winds.

The coast between Bandar Murcaayo and Raas Felug, about 18 miles NE, is low and sandy. Two small villages lie within 1.5

miles NE of Bandar Murcaayo; the NE village can be identified by two high clumps of palm trees close SSW.

Geesaley, about 3 miles farther NE, consists of a few houses, several huts, and a prominent fort and large house in the NE part of the village.

A large group of palm trees in this area contrasts with the barren coast.

Anchorage off these villages are exposed though, the bottom is sand with fairly good holding ground. Depths of over 10m have been reported to exist about 0.5 mile offshore.

Qoor Felug (11° 51'N., 50° 32'E.), with a depth of 2.4m in the entrance, is mostly swampy and covered with mangroves.

Xabo, a village on the S side of the entrance of Qoor Felug, about 3 miles NNE of Geesaley, consists of some houses and huts and a conspicuous fort.

It has been reported that large vessels can anchor, in a depth of 31m, with the fort at Xabo bearing 144°, distant a little over 0.5 mile. Vessels with local knowledge can anchor in depths of 11 to 12.8m, with the fort at Xabo bearing 090°, but care should be taken to let out enough chain to avoid dragging into deep water.

Small vessels can obtain excellent anchorage off the entrance of Qoor Felug. A radar conspicuous wreck lies on the coast about 6 miles SW of Raas Felug.

10.34 Raas Felug (Capo Elefante) (11° 56'N., 50° 38'E.) is an elephant-shaped promontory, 277m high. This conspicuous headland rises steeply from the sea at its N end and has been reported to be visible for about 26 miles.

When viewed either from the E or W, it appears like an island because of the low land. An inconspicuous beacon, 6m high, stands on Raas Felug. A small bay close W of Raas Felug provides shelter from E and S winds. A conspicuous bush stands S of the head of this bay.

Small vessels with local knowledge can anchor, in a depth of 9.1m, with the beacon on Raas Felug bearing 077°, distant 0.5 mile. Heavy seas and swells are raised in the bay when strong SW and NE winds are blowing. It has been reported that Raas Felug is a good radar target at distances up to 23 miles.

Caluula (11° 58'N., 50° 46'E.), fronted by an open roadstead, carries on a considerable trade with Aden and consists of a few stone houses and numerous huts. Several ruined towers stand in the vicinity and a large cemetery stands in the S part of the town. The residency, with a flagstaff, stands close to the shore in the SW end of the town.

A main light is shown from a framework tower, 13m high, standing on the NW corner of the residency.

A very large lagoon, entered close NE of Caluula, is mostly covered with mangroves. Shallow passages cross the lagoon, which can only be used by small craft with local knowledge at HW. The Northeast Monsoon is light in the morning, strengthens toward noon, and diminishes in the afternoon.

In the month of May and the first half of June, it is usually calm. During the Southwest Monsoon, the wind blows from the W and often raises a considerable sea. From mid-August to mid-September, a light variable ENE wind prevails.

Anchorage can be taken, in depths of 11 to 16.5m, about 0.5 mile offshore, with the residency bearing 180° and Raas Caluula bearing 054°.

Anchorage can also be taken, in a depth of 11m, with the residency bearing 142° and Raas Caluula bearing 054°, or in 13.7 to 17.4m, about 0.5 mile offshore, with Raas Caluula on the same bearing and the fort in the NW part of Caluula, bearing about 150°.

10.35 Raas Caluula (11° 59'N., 50° 47'E.), low and sandy, rises gradually to the high mountains in the interior. The currents in the vicinity of Raas Caluula have been observed to set toward the coast. It has been reported that Raas Caluul is radar conspicuous.

In the month of June, a vessel reported being set to the WSW while heading to the E.

The coast between Raas Caluula and Gwardafuy, about 31 miles ESE, is bordered by a few small projecting points forming small bays.

The coast is low for about the first 8.5 miles; it then becomes steep and mountainous. Depths of less than 18.3m extend up to 3 miles from this section of coast. A 2.5 knot current has been reported to set WNW about 5 miles offshore between Raas Caluula and Gwardafuy.

Bereeda (11° 52'N., 51° 03'E.), a village about 17 miles ESE of Raas Caluula, is scattered along the shore at the base of the mountains. The Sultan's Residence, a large two-story house with a tower, is the most conspicuous object in the village.

Anchorage can be taken, in a depth of about 8.2m, about 0.5 mile NW of the Sultan's Residence, but the bottom is rocky and irregular. Olog (Olod) and Damo, two small villages, stand within 4 miles W of Gwardafuy.

Good anchorage, sheltered from S winds, can be taken about 0.5 mile N of both villages, in depths of 12.8 to 14.6m, sand, good holding ground. Approaching Olog, steer for the fort in the village in range 186° with the conspicuous knob about 9 miles SW of Raas Caluula. Approaching Damo from the E, steer for Olog and anchor with the fortress at Damo bearing 163°.

Caution.—A depth of 9m was reported to exist about 7 miles NNW of Bereeda.

10.36 Gwardafuy (Raas Caseyir) (Ras Asir) (11° 50'N., 51° 18'E.), about 238m high, is steep-to, rocky, and high, especially on its N side. It is difficult for a vessel to estimate their distance off because of the grayish appearance of the cape in light fog or mist.

A main light is shown from a masonry round tower, 20m high, standing on the summit of this cape. This light structure was reported (1994) to be damaged and unreliable.

Tides—Currents.—During the Southwest Monsoon, the currents set strongly N along the coast S of Gwardafuy, then closely round the cape and set to the W; a short distance from the cape, the currents continue to the N and ENE.

In the month of July, a S current with a velocity of 1 to 2 knots was experienced close inshore from a position about 8 miles S of Gwardafuy to Raas Xaafuun. When the Northeast Monsoon sets in, the current sets S and W with a velocity scarcely exceeding 2 knots. At the change of the monsoon, the currents are very variable.

Aspect.—When seen from the N, the cape appears as a regular slope descending to the sea. When viewed from the

NE, it can easily be distinguished by the light sand on the summit, the sandy bay to the W, and the lighthouse on its top.

It has been reported that Gwardafuy is a good radar target at distances up to 22 miles.

Caution.—Many wrecks have occurred on the coast S of Gwardafuy, and caution should be exercised when approaching this cape from SE or S, particularly during the Southwest Monsoon.

The weather during this period is stormy, the seas high, the currents strong, and the land generally covered by a thick haze.

The outlines of Gwardafuy and Raas Shannagiif, about 10 miles SSW, are similar, but the latter is 927m high; a broad, comparatively low, sandy plain extends between these two points. The light color of this low land makes it difficult for a vessel to estimate its distance offshore, especially at night.

At night and in foggy weather, Raas Shannagiif is barely visible, despite its imposing rocky mass.

When Gwardafuy cannot be seen, which often happens because of the thicker fog near sea level and the light color of the land, mariners have mistaken Raas Shannagiif for the cape and have altered course to the NW and run aground.

A gradual change in the color of the water from blue to dark green is usually noticed when a vessel is approaching the land in this vicinity during the day.

During the Southwest Monsoon, the sea is usually smoother N of **Raas Xaafuun** (10° 27'N., 51° 24'E.) and tends to come from the SE. However, if the land is not seen only soundings should be relied on.

A NW course to round Gwardafuy should not be taken if the soundings do not indicate depths considerably more than 183m. The extensive banks lying about 25 miles NNW of the cape should be left to the N.

10.37 The coast S of Gwardafuy consists of a fertile valley full of large trees, with a stream running through it. Tooxin, a conspicuous village near the entrance of this stream, stands about 6 miles S of Gwardafuy and consists of some buildings, a mosque, and numerous huts.

Raas Shannagiif (11° 41'N., 51° 15'E.), round, rocky, and steep-to, appears as a bold rugged headland, especially from the SE. It marks the NE extremity of Jebel Gural and the bluff termination of a tableland over 914m high.

The dark land in the vicinity and to the S of this cape contrasts markedly with the light color of the land between it and Gwardafuy. It has been reported that Raas Shannagiif is a good radar target at distances up to 25 miles.

A rounded sandhill with a large tract of sand extending N from it stands near the coast. This is a good landmark, being the only white patch in the vicinity. A 95m peak about 7 miles farther S is a good landmark.

Gubed Binna (11° 14'N., 51° 08'E.) is entered between a position about 18 miles SSW of Raas Shannagiif and Raas Binna, about 15 miles farther S.

In its N part, a bush-covered plain extends about 4 miles inland, then rises to Jebel Gural. The SW part of Gubed Binna is low, sandy, and bush-covered.

10.38 Bargaal (11° 17'N., 51° 04'E.), a village consisting of several huts and some ruins, stands 10 miles NW of Raas

Binna. The steep slope at the mouth of a stream is a good mark for identifying this village.

Anchorage can be taken by vessels with local knowledge, in a depth of 12m, about 0.5 mile off Bargal. This position is exposed and the holding ground is poor.

Several villages, in ruins, stand between Bargaal and Uadi Gondoli.

Vessels with local knowledge can anchor, in a depth of not less than 12.8m, about 5 miles W of Ras Binna, sheltered from S winds. Squalls from the SW are common.

Gubed Binna is exposed to the Northeast Monsoon, which blows intensely from 0900 to 2200, then abates and veers W until the early morning, when it begins blowing lightly from NW.

A dangerous surf rolls onto the beach during the Northeast Monsoon.

Raas Binna (11° 08'N., 51° 11'E.) consists of a rocky, steep cliff about 154m high. When seen from the N, this point looks like an island. The coast between Raas Binna and Surat Village, about 21 miles S, is low, sandy, and covered with bushes. The village of Handa, about 9 miles farther S, is partially in ruins. The ruins of a large square, stone building stand near the coast at Handa; the dark color of its walls contrasts with the white background. A lagoon stands close to this village.

10.39 Raas Xaafuun (Ras Hafun) (10° 27'N., 51° 24'E.) is the E extremity of J-Sha Xaafuun (Penisola de Hafun), which rises steeply from the sea in steep cliffs to a height of 210m on its S side. The E end of this peninsula is flat, while its inner part consists of rolling hills intersected by deep ravines.

A main light is shown from a white building, 13m high, standing on the summit of this point.

The peninsula is connected to the mainland by a low strip of sand which appears as a breakwater. When viewed from N or S, this peninsula appears like a large detached island. It has been reported that Raas Xaafuun is radar prominent.

Qooriga Hurdiyo (10° 30'N., 51° 10'E.), on the N side of the isthmus to J-Sha Xaafuun, is a large salt lake available only to boats. The entrance leading into this shallow lake is obstructed by sand and the approach fouled by several dangers. Hurdio, a village on the N side of the entrance, consists of some huts and a few stone houses. A small boat harbor lies S of the village.

Gacanka Xaafuun Wag (10° 36'N., 51° 20'E.), on the N side of J-Sha Xaafuun, is clear of dangers and is sheltered from the Southwest Monsoon. Depths of less than 9.1m extend up to 0.5 mile offshore.

During the Southwest Monsoon, good anchorage can be taken in this bay, in depths of 12.8 to 18.3m, hard sand. The holding ground is indifferent and many vessels have dragged anchors during strong S winds. During the Southwest Monsoon, a heavy swell rounds Raas Xaafuun and violent squalls blow across the promontory.

Off-lying Islands East of Gwardafuy

10.40 Abd al Kuri (12° 12'N., 52° 12'E.), a hilly island, except for the low middle part, is about 20 miles long. To a vessel some distance N or S, this low part of the island gives the appearance of two islands.

The N coast of the island consists mostly of a sandy beach, with a few rocky points, whereas the S coast consists of steep cliffs. It has been reported that Abd al Kuri is a good radar target at distances up to 23 miles.

Tides—Currents.—During an early survey of this area, the current was found to set ENE at a velocity of 0.5 to 1.5 knots, with numerous tide rips in the vicinity of shoal water. In the month of December, during the Northeast Monsoon, a current setting NNW at a velocity of 1 knot was experienced between Gwardafuy and Abd al Kuri.

Through the passages among the islands W of Suqutra, the tidal currents set N during the flood and S during the ebb, at a reported velocity of 1 to 2.5 knots, but they are much influenced by the currents caused by the prevailing monsoon.

Caution.—Caution should be observed when passing W of Abd al Kuri, especially at night, because it is difficult to estimate the distance off the W end of the island, the high land being some distance inland. To ensure passing not less than 2 miles off, vessels should keep in depths of greater than 92m.

10.41 Ras Khasat an Nawm (12° 14'N., 52° 04'E.), the W extremity of the island, consists of two sharp rocky points about 0.5 mile apart. A rocky reef, with a least depth of 3.6m, extends about 1 mile W from the N point.

The coast between Ras Khasat an Nawm and a rocky point about 7 miles E, is irregular, but up to 6 miles farther E, it consists of small rocky points, with sandy beaches in between.

A sunken rock lies close offshore, about 2 miles E of the above rocky point.

A shoal, with depths of less than 5.5m, extends about 0.5 mile N from the coast close to this sunken rock. In the bight between Ras Anjarah, the NE extremity of the island, and a point about 7 miles to the W, the coast is low and sandy, with a few huts. Some sunken rocks are reported to lie close offshore in this vicinity. Ras Anjarah is rocky and marked by a sand hill.

Anchorage off the N side of Abd al Kuri is reported to be indifferent but in the month of August, anchorage has been taken, in a depth of 16.5m, sand, good holding ground, with the small rocky point about 7 miles E of Ras Khasat an Nawm bearing 136°.

Between Ras Khasat an Nawm and the W entrance of Bandar Salih, about 7 miles ESE, the coast is steep-to. A bluff stands about 3 miles ESE of the W end of the island; about 3 miles farther ESE is a rocky islet, with a small foul bay.

10.42 Bandar Salih (12° 10'N., 52° 13'E.), backed to the N by the narrowest part of the island, was reported to be fouled in its W part.

During the Northeast Monsoon, good anchorage can be taken, in depths of 11 to 18.3m, coral, in Bandar Salih, about 0.2 to 0.5 mile offshore. Between the E entrance of Bandar Salih and the SE extremity of the island, the coast is bordered by high cliffs and is steep-to.

The SE extremity of the island is low and rocky, with a mountain range rising to the W from it. A bay with a sandy beach lies between this point and Ras Anjarah. Two above-water rocks lie close offshore, about 0.5 mile SW of Ras Anjarah.

Kal Firawn (12° 26'N., 52° 08'E.), about 13 miles NNE of Ras Khasat an Nawm, consists of two rocky, steep-to islets

separated by a narrow foul channel. These islets stand on the N end of a bank with depths of 12.8 to 36.6m.

The NE and largest islet has three peaks, with the highest rising to an elevation of 85.9m; the SW islet has a peak of similar height and a smaller one. All of these peaks are guano-covered. Both of these islets are difficult to make out at night.

A 13.5m patch was reported to lie about 1 mile NE of the E extremity of Kal Firawn.

Coral Bank (12° 17'N., 51° 56'E.), with a least depth of 44m, lies about 8 miles WNW of Ras Khasat an Nawm. A 5.5m patch lies 10.5 miles NW of the same point.

Bacchus Bank (12° 14'N., 52° 26'E.), with a least depth of 5m, lies about 2 miles NE of Ras Anjarah.

A large ripple can be seen on this bank when the wind is in opposition to the currents.

Al Ikhwan

10.43 Al Ikhwan (The Brothers) (12° 08'N., 53° 10'E.) consists of Samhah and Darzah, two islands separated by a channel about 9 miles wide.

Samhah (12° 09'N., 53° 03'E.) rises to a small hill near its W end, and to a table mountain, 780m high, which covers nearly half of the island.

The island is bordered by rocky coasts, with precipitous cliffs on its S side. The N extremity of the table mountain is a well-defined bluff.

A rock, with a depth of less than 1.8m, lies on the coastal reef which extends about 0.5 mile W from the W extremity of the island; two rocky islets stand about 0.5 mile off the SE side of the island. A small bank, with a depth of about 23m, lies about 2 miles NE of the E end of the island.

A depth of 16.4m lies about 4 miles W of the W end of the island. A 10.9m depth was reported to lie about 15 miles WSW of the W end of Samhah; a 20.1m patch was reported to lie about 2 miles farther W.

It has been reported that the W end of Samhah and the rock close offshore lie about 1 mile WNW of their charted positions. A depth of 9m is reported to lie 1.5 miles SE of Samhah.

Darzah (12° 07'N., 53° 17'E.) rises vertically from the sea to a flat table-topped summit, 392m high. The N extremity of the island extends about 0.5 mile from the base of this mountain.

A depth of 11m is reported to lie 1 mile SW of the W end of Darzah. A depth of 31m is reported to lie 2 miles S of the W end of Darzah.

It has been reported that Samhah and Darzah are good radar targets at distances up to 25 and 24 miles, respectively.

Suqutra

10.44 Suqutra (12° 34'N., 53° 59'E.), about 130 miles ENE of Gwardafuy, is part of Yemen. Although this island lies near the track of vessels entering or leaving the Gulf of Aden, it is seldom visited because it is exposed to both monsoons. It also has no harbors in which vessels can anchor with safety, and the character of the natives in the past has been reported to be belligerent. Vessels are advised to remain well clear of this island.

With the exception of a few headlands from which reefs project, the coasts of Suqutra are bold, with moderate depths in places some distance offshore.

The S coast is almost an unbroken line but is seldom visited. The N and W coasts are broken by a series of small bays which provide anchorage according to the season.

Streams of fresh water usually discharge at the heads of these bays.

During the Northeast Monsoon, the N side of the island is considered safe from about February, when the monsoon is nearing its end.

Over a broad area, hills rise abruptly in vertical cliffs, several hundred feet high while at other places plains extend up to 5 miles inland. On the N side, the plains are generally found at the sites of villages. Nawqid (Nojid), a plain which is covered for miles by sand dunes, extends almost the entire length of the island on its S side.

The interior of the island is broad, rolling and intersected by the stone plateaus, about 300m high to the W, S, and E, of which are a nucleus of granite peaks, over 1,200m high. The latter are usually obscured by clouds, but when the weather is clear their appearance is broken and picturesque. All of this hilly region is deeply intersected by ravines and valleys, through which water flows during the rainy seasons, but the majority of which are empty during the dry season.

Few streams reach the coast during the latter season. The SW side of the island is arid and barren, but much of the remainder is comparatively fertile, being well-watered by the monsoon rains of July and December.

It has been reported that Suqutra is a good radar target at distances up to 24 miles.

Winds—Weather.—The climate on Suqutra, compared with the nearly African and Arabian coasts, is temperate and cool, caused by both monsoons blowing over a large expanse of water. The climate is very healthy in the hills, but fever is prevalent on the plains, especially at the change of the monsoons.

From November to January, NNE winds prevail, blowing in violent squalls for several days at a time.

The fine weather season prevails from February to May; at this time the anchorages on the N coast are considered safe.

During June, July, and August, the Southwest Monsoon, then at its height, is said to blow constantly in hard and violent squalls on the N coast while on the S coast, it blows more steady and less violent, but is accompanied by a heavy sea and surf.

In September, October, and the first part of November, light land and sea breezes prevail, which become more steady from the N toward the latter part of November.

Tides—Currents.—The currents close around Suqutra are influenced by the winds and tidal currents, and generally set with the wind after it has blown hard from the same direction for some time. Many years ago in December, with the Northeast Monsoon well-established, a current setting NW, at a velocity of 2.5 knots, was experienced off the S coast of the island between the W extremity and a position about 52 miles to the E.

The tidal currents are very irregular and depend greatly on the strength and direction of the wind; sometimes they set in one direction for 16 hours, while at other times they set in one

direction only for 6 hours. During the flood, the tidal currents set W off the S side of the island and E off the N side, while during the ebb they set in the opposite direction. The E current off the S side of the island sets at a velocity of 1 knot, depending greatly, however, on the wind.

10.45 Ras Shuab (12° 32'N., 53° 18'E.), the W extremity of Suqutra, is bold and rises to Jabal Shuab, 632m high, about 3 miles to the E. A reef extends about 0.2 mile from the NW side of Ras Shuab.

Sabuniyah (12° 38'N., 53° 09'E.), about 11 miles NW of Ras Shuab, is a white-colored islet, 69m high, which rises to three granite peaks.

When seen from a distance it resembles two vessels under sail; when seen from the N, it appears wedge-shaped. The passage between this islet and Suqutra is deep and clear of dangers.

Ghubbat Shuab (12° 35'N., 53° 22'E.), is entered between Ras Shuab and Ras Baduwa, about 71 miles NE. There are no known dangers in Ghubbat Shuab and the bottom is mostly sand or rock. A salt water lagoon, with mangroves on its banks, stands at the head of this bay, and is separated from the sea by a sand bank.

Caution is necessary when making Ras Shuab because many years ago in December, during the Northeast Monsoon, it was obscured by heavy rain squalls at sunset.

Ghubbat Shuab is quite exposed to the Southwest Monsoon, but during the Northeast Monsoon, it provides good anchorage with smooth water, although at times strong squalls are experienced.

During the latter season, the best anchorage is in a depth of 18.3m, white sand, about 0.5 mile offshore, with Ras Shuab bearing 241° and Ras Baduwa bearing 010°. This anchorage lies off some mangrove trees N of the salt water lagoon.

Caution.—A dangerous wreck lies in an approximate position about 4 miles ENE of Ras Shuab.

10.46 Ras Baduwa (Rhiy di-Bidoh) (12° 43'N., 53° 30'E.) is a steep-to bluff, 92m high.

Ghubbat Qulansiyah (12° 41'N., 53° 28'E.) is entered between a point about 3 miles ENE of Ras Baduwa and Ras Qulansiyah, about 4 miles farther ENE, and provides shelter during the Northeast Monsoon.

Ras Qulansiyah rises to four small granite peaks; these peaks, together with the hills in the vicinity, are good marks for identifying the cape. A village with a mosque stands in a grove of trees, about 0.5 mile S of Ras Qulansiyah.

The depths in Ghubbat Qulansiyah are irregular and there are overfalls.

A rocky reef, almost all of which dries, fringes the shore of the bay and extends up to 0.2 mile offshore.

Large vessels can anchor, in depths of 12.8 to 18.3m, with the mosque in the village bearing 135°, distant about 1 mile. Small vessels with local knowledge can anchor, in a depth of 7.3m, about 0.5 mile offshore, with the mosque bearing 124° and the N granite peak inland of Ras Qulansiyah bearing 062°.

The coast between Ras Qulansiyah and a point about 3 miles ENE forms a bight which is foul over most of its area. From the E entrance of the above bight to Ras Bashuri, about 2 miles

farther E, the rocky coast is backed by high mountains which rise steeply from the sea.

A pyramidal rock, about 137m high, stands close off Ras Bashuri and is connected to it by a narrow neck of land.

10.47 Ghubbat Qurmah (12° 40'N., 53° 48'E.) lies off the low, sandy coast between Ras Kadarma, about 5 miles E of Ras Bashuri, and Ras Qurmah, about 14 miles farther ESE. Ras Kadarma is low, with the extremity of a high bluff close back of it.

Ras Qurmah is low, sandy, and fringed by a reef extending about 0.2 mile offshore. The shore of this bay is backed by a mountain chain about 6 miles inland, with a pass near the middle and another pass S of Ras Kadarma.

A deep salt water lagoon, extending about 0.5 mile inland and bounded by fairly high cliffs, is located about 6 miles WSW of Ras Qurmah; the entrance of this lagoon is covered.

During the Northeast Monsoon, a considerable swell makes up in the W part of the bay, while during the Southwest Monsoon, the heavy swell is felt when the wind is well to the W. The best anchorage lies about 0.6 to 0.7 mile offshore, in depths of 9.1 to 11m, sand and coral, with Ras Qurmah bearing about 055°, distant about 2 miles.

The coast between Ras Qurmah and Ras Taab, about 2 miles ENE, is fringed by a reef which extends about 0.5 mile offshore. This fringing reef continues ESE for a distance of about 3 miles to the bight between Ras Taab and Hebaq (Ras Habak), about 4 miles ESE. There are three villages along the coast in this bight; a mosque stands in the W village. During the Southwest Monsoon, anchorage is provided in this bight.

Tamrida Bay (12° 40'N., 54° 01'E.) is entered between Hebaq, bold, vertical and rocky, and Ras Hulaf, about 8 miles ENE. Hadiboh (Tamrida), the capital of Suqutra, stands 2.5 miles E of Hebaq near a river and is surrounded by groves.

Three villages stand within 3 miles E of Hadiboh; a fourth stands 1 mile S of Hebaq. Two white towers and a mosque stand in the latter village.

The high, craggy peaks of the mountain range behind Hadiboh are useful in identifying it from seaward. Jabal Haggier, the summit of this range, rises about 3 miles S of the town.

A sand hill, about 3 miles ENE of Hadiboh, appears as a white cliff sloping to the S when seen from the NW at a distance of 10 to 12 miles. This sand hill is prominent and twin-peaked, with a sharp and noticeable dividing line between them. The E half is composed of yellow sand; the W half consists of brown rock.

10.48 Ras Hulaf (12° 42'N., 54° 06'E.) is the NW extremity of a low, rounded projection which consists mostly of rolling sand hills covered with bushes. This projection rises gradually inland, its coasts consisting of small rocky points with sandy beaches between them. These sand hills and Ras Hulaf are good marks for identifying Hadiboh when the high mountain peaks are obscured.

Hadiboh consists of a number of white houses around the residence of the Sultan, a few mosques, and a fort. These buildings, the white tower of the mosque on the W edge of the town, and the palm plantation about 0.5 mile E of the town, are good landmarks.

During the Southwest Monsoon, the anchorage is exposed to strong squalls from the mountains. A heavy swell sets in when the wind is well to the W, making good ground tackle necessary.

The bay is particularly unsafe from November to January, when heavy squalls from the N are frequent. February to May is considered the best season. The holding ground in the bay, of sand and stone, has patches of mud.

A good berth, in a depth of 16.5m, can be taken with Ras Hulaf bearing 067° and the large square house in the town bearing about 175°.

A vessel reported anchoring, in a depth of 9.1m, with the mosque at Hadiboh bearing 180°, distant 0.5 mile.

A vessel reported the water in the approach to Hadiboh remarkably clear; when at anchor, in a depth of 12.8m, every detail of the bottom was clearly visible.

Between a point about 3 miles ESE of Ras Hulaf and Ras Dehammeri, about 4 miles farther E, the coast is indented by a small bay, with Bandar Debeni in its E part. A small mosque, in ruins, or a tomb, stands on the W entrance point of this bay.

A sand hill is reported to stand on the coast, about midway along the shore of this bay. An inlet, closed during the dry season, stands 0.5 mile W of this sand hill. Some trees stand on the banks of a stream at the S end of this inlet.

10.49 Bandar Debeni (Bindar Dibni) (12° 41'N., 54° 10'E.), the small bay on the W side of Ras Dehammeri, is clear of dangers, except for a rocky spit extending W from the cape.

Ras Dehammeri (12° 40'N., 54° 12'E.) is the N extremity of a narrow peninsula extending N from the coast. Two reddish hills, the N hill of the two rising to a height of 40m, stand on this peninsula and are useful in identifying it.

A steep-to rock, with a depth of less than 1.8m, lies close N of the cape; a rocky spit, with a depth of 4.6m, extends about 0.2 mile W from the cape.

Good anchorage can be taken by vessels with local knowledge anywhere near the shore in the W part of the bay. This is the most sheltered anchorage off Suqutra during the Southwest Monsoon.

A good berth is in 12.8 to 16.5m, about 0.5 mile offshore with the sand hill bearing 180°. Bandar Debeni provides shelter for small vessels, in depths of 5.5 to 6.4m, coral and rock, with Ras Dehammeri bearing about 067°. This position lies SW of the rocky spit extending W from the cape.

10.50 Between Ras Dehammeri and **Ras Hammadara** (12° 38'N., 54° 13'E.), about 5 miles ESE, rocky points with sandy bays between, extend from the coast at intervals. The latter point is low and rocky.

The bay close E of Ras Dehammeri provides sheltered anchorage, during the Southwest Monsoon, in depths of 11 to 18m, about 0.2 to 0.5 mile offshore. An inlet, which almost dries, stands about midway between the above two points and can be identified by some trees on its banks. A fairly steep-to patch of rocks, which almost dries, lie about 0.5 mile NE of Ras Hammadara.

The channel between these rocks and the coastal reef is about 0.1 mile wide, with depths of 5.5 to 9.1m. The coast between Ras Hammadara and Ras Daydum, about 8 miles to

the E, is marked by occasional rocky points with sandy beaches in between.

There are some date groves along this section of coast. High land, rising to elevations of 305 to 366m, back this coast about 2 miles inland.

With the exception of the rocks off Ras Hammadara, no known dangers exist off this coast. It is not advisable to approach this coast during the Northeast Monsoon.

10.51 Ras Daydum (12° 35'N., 54° 25'E.), rocky and about 76m high, appears to mark the E boundary of the fertile land, the territory E of it having only a few trees.

Bandar Faka (Bindar Fikhah) (12° 33'N., 54° 29'E.) is entered between Ras Daydum and a point about 8 miles ESE. The low, sandy shores of this bay are backed by fairly high mountains about 0.5 mile inland. Two double sand hills stand about midway along the shore of this bay and are topped by a few trees. A reef extends about 0.5 mile N from the E entrance point of Bandar Faka.

Temporary anchorage can be taken in the E part of Bandar Faka, sheltered from E winds by the reef mentioned above.

The best anchorage is in depths of 16.5 to 22m, about 0.5 mile offshore, with the outer breaker of the reef mentioned above bearing 045° and the point about 2 miles E of Ras Daydum bearing 287°.

Caution is necessary when rounding this reef because, unless the wind is fresh, the outer breaker, with a depth of 9.1m close to it, is not always visible.

Ras Momi (Rhiy di Moni) (12° 32'N., 54° 29'E.), about 6 miles ESE of Ras Daydum, is a sharp high bluff about 274m high and is the E extremity of the mountain range which transverses the island.

In clear weather, this bluff is visible for a considerable distance when the low land near Ras Darishah is not. The land between Ras Momi and Ras Darishah, about 4 miles E, slopes gradually to several small hills about 55 to 61m high.

Ras Darishah (12° 35'N., 54° 29'E.), the E end of Suqutra, consists of two rocky projections, about 0.5 mile apart, fringed by a reef. This reef extends about 0.3 mile NNE from its N extremity and about 0.2 mile SE from its S extremity. There are strong tide rips over the former part.

A 9.1m patch and a reef, which dries in places, lie 0.5 mile E and 0.6 mile SE, respectively, of the S end of Ras Darishah. A heavy sea usually breaks over the reef.

A conspicuous wreck is charted about 2 miles SE of Ras Darishah.

It has been reported that Ras Darishah is a good radar target at distances up to 22 miles.

Caution.—The low land at Ras Darishah is often obscured by haze during the Southwest Monsoon and sometimes by heavy rain squalls during the Northeast Monsoon. This, together with the fact that soundings give no indication of the approach to the cape, makes Ras Darishah dangerous to approach.

10.52 The S coast of Suqutra is steep, with the depths decreasing gradually toward the shore. No known off-lying dangers exist but overfalls are found in places.

Anchorage can be taken anywhere about 1 mile offshore, in depths of 16.5 to 22m, sand and coral.

Ghubbat di-Net (Ghubbat Nayt) (12° 25'N., 53° 27'E.), an open bay about 10 miles SE of Ras Shuab, provides anchorage off a village on the S shore during the Northeast Monsoon. A small sand hill stands close N of the NW entrance point of this bay.

The coast between Ghubbat di-Net and Ras Qatanan, about 7 miles SE, is rocky and steep, with several small points and bays. Depths of 3.7 to 11m lie within a few meters off this coast.

Ras Qatanan (12° 21'N., 53° 32'E.), a vertical bluff 511m high, appears the same when viewed from the E or W.

Jabal Kuireh (12° 21'N., 53° 32'E.), a flat-topped limestone range, extends about 5 miles E from Ras Qatanan.

This same range, with different names, parallels the coast a short distance inland for the remaining length of the island. It

rises like a wall and is separated in places by a few mountain passes. Nawqid (Nojid) lies between these mountains and the coast.

Ras Falana (12° 29'N., 54° 27'E.), about 31 miles E of Ras Qatanan, appears as a bluff when viewed from any distance to the W; however, on closer approach, it appears as a low point extending SE with a bay on each side.

A steep-to reef, partly above water, extends about 0.2 mile SE from the cape.

A bluff, 458m high, stands about 2 miles W of Ras Falana, and continues NE as high land to Ras Mami.

Bandar ar Risal (12° 31'N., 54° 29'E.), the bay between Ras Falana and Ras Darishah, provides temporary anchorage in smooth water during the Northeast Monsoon. The best berth lies in the middle of the bay, in a depth of 16.5m.